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PROCEEDINGS
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STATEN ISLAND INSTITUTE
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VOL. I OCT. 1918—MAY 1921 PARTS I — 3

The Meeting of the First Legislative Assembly in America¹

HON. HOWARD RANDOLPH BAYNE

The colonization of Virginia was undertaken by a commercial company as a commercial enterprise. Under a charter granted in 1606 the London Company sent forth on the 19th of December of that year their first convoys of men and provisions, and a settlement was effected on a bend of that noble river (then named the James, in honor of the reigning monarch of England) on the 13th day of May 1607. We need not pause to wonder at the ill-sorted company and the improvidence of the managers of the venture in sending out upon such a mission men so poorly qualified by nature, education, and inclination to lay the foundations of a new state. We are bound to believe the London Company did the best they could under the circumstances. It was not an easy matter to be choice in the selection of men. An expedition across the Atlantic in those days doubtless offered more chances of a safe landing than not, but the great majority of worthy substantial people of the time did not think so. And thus those that were

Read at the regular meeting of October 16, 1920, devoted to the Tercentenary Celebration of the Mayflower Compact and the First American Legislature.

willing to go were not generally fit, and those that were fit were not, as a rule, willing to go.

We may surmise that very few of those that landed at Jamestown on that beautiful May day ever dreamed for a moment of spending their lives in a wild Indian land, or of building up a new country in the only way the wisdom of the world has ever discovered: by hard labor, resolution, constancy, common sense, common virtue, and common courage.

The dare-devils, the ne'er-do-wells, the broken-down gentlemen, the soldiers of fortune, the adventurers without ties, without hope and quite as well without fear, served their day and generation very well indeed by risking their lives and losing them for the sake of the expedition. They set the fashion and made the way to Virginia familiar and commonplace after a while.

The charters of 1606 and 1609 gave way to yet another in 1612, which transferred the government of the colony from the council to the company through the courts.

These courts were quarterly meetings of the London Company, styled the four Great and General Courts of the Treasurer, Council, and Company of Adventurers of Virginia.

These meetings in London were educating a great many people in the art of governing a state. James I would have been astounded if he could have seen how clear and keen and just were growing the conceptions of popular rights.

And so it was by 1619 some progress had been made through a great deal of suffering in the colony, some of which was really unnecessary, undeserved, and not to be expected, but very little. Things were managed in such a way that for twelve years from 1607 the only path to progress was over the miseries of the living and the bodies of the dead. The spent lives of the roving, the venturesome, the unscrupulous, the drones, the devil-me-cares, were not altogether wasted even in these later days, cut short indeed as they were and all too soon.

We owe some victories to the legions of the lost.

In 1616 there were six distinct settlements, or as they were then known, towns, plantations, or hundreds curiously organized and partaking of the nature of a military, political, religious, and social establishment. The total population at this time was 357. Mr. John Rolfe, in his "Relation," quaintly informs us that there were then in the colony, "83 cowes, heifers and calves, 41 steeres, 20 bulles." "Memorand: 20 of the cowes were great with calfe," "3 horses, 3 mares, Goats and Kidds, male and female in all 216, Hoggs wild and tame not to be numbered, Poultry great plenty."

In "A Declaration of the State of the Colony and Affairs in Virginia," issued by the "Counseil" in 1620, the following description is given:

"The Countrey is rich, spacious and well watered; temperate as for the climate; very healthful after men a little accustomed to it; abounding with all God's naturall blessings. The Land replenished with the goodliest woods in the world, and those full of Deere, and other Beasts for sustenance: The Seas and Rivers (where of many are exceeding faire and navigable) full of excellent fish, and of all sorts desirable; both Water and Land yeelding Fowle in very great store and variety: In Summe, a Countrey too good for ill people; and wee hope reserved by the providence of God, for such as shall apply themselves faithfully to his service, and be a strength and honour to our King and Nation."

There had been almost from the beginning two parties in the company in London: the Court Party, backed by His Majesty's influence and contending to extend his power and prerogatives; and the Country or Virginia Party, striving for the best interests of the colony and the gradual development and the prevalence of popular rights.

Up to 1619 the Court Party were in the ascendancy, but in that year the control of the company, upon the defeat of Sir Thomas Smith for the treasurership, passed to the Virginia Party. Sir Edwin Sandys was elected treasurer and a new order of things began. The result of the election caused great excitement in England, we are told, and the discussions in the company and its policies attracted more and more the popular attention.

The strength of the Virginia Party had previously been developed in the appointment but a short time before of George Yeardley as Governor of Virginia. He was a man of humble birth, the son of a merchant tailor and the brother of an apothecary. But he had made a good record in Virginia, whither he had gone in 1610, and when, in 1618, he "was," according to John Pory, "at his late being in London, together with his lady, out of his mere gettings here (Va.), able to disburse very near three thousand pounds to furnish him with the voyage"; he, "who at the first coming, besides a great deal of worth in his person, brought only his sword with him"; his success and services drew such attention to him that he was elected governor, and James, to make him worthy of the honor, thereupon touched Yeardley upon his shoulder with a sword and he became a knight.

So in January 1619 the new governor sailed for Virginia, where he landed at Jamestown on April 19th, just nine days before the election of Sandys, the greatest statesman of the company and one of the ablest and best friends the colony ever had.

At this time there were about 1,000 persons in the colony, but such was the quickening effect of the new order of things, in the course of the next year there were sent and sending about 1,200, or more than the whole population after twelve years of the former rule. And in the next fifteen years, in spite of the massacre of 1622, the figures reached 4,914.

The new governor found on his arrival at Jamestown "only those houses that Sir Thomas Gates built in the tyme of his government, with one wherein the Governor always dwelt, and a church built wholly at the charge of the inhabitants of that Citie, of timber being fifty foote in length and twenty foote in breadth."

At "Henrico three old houses, a poor ruinated church, with some few poore buildings in the Islande. For ministers to instruct the people, he founde only three authorized, two others who never received orders."

While the colonists were generally able to earn little more than a livelihood at this period, yet John Pory, secretary under Yeard-

ley, wrote to Sir Dudley Carleton: "Your Lordship may know that we are not the veriest beggars in the world. One cow-keeper here in James City, on Sunday goes accoutred in fresh, flaming silk and a wife of one, that in England had professed the black art, not of a scholar, but a Collier of Croyden, wears her rough beaver hat with a fair pearl hat band, and a silken suit thereto correspondent."

Shortly after his arrival, Yeardley sent his summons to each of the boroughs, towns, or plantations to elect two burgesses to attend a general assembly to consist of the governor, the council, and the burgesses, each free man being entitled to a vote, to be held at Jamestown on July 30, 1619.

The details of the election are wanting but, if the time-honored practice within the memory of those yet living is any guide, the vote was taken by each elector coming up to the polling place and there in the presence of his countrymen proclaiming aloud, so that all might hear, the candidates of his choice.

However this may be, the burgesses were elected. There were at the time eleven boroughs or plantations; each was represented, so there were twenty-two burgesses in all, and these with the governor and council constituted the Assembly.

They met at Jamestown on July 30, 1619, in the "Quire of the Church." John Pory, the secretary of the colony, was appointed speaker, who reported the proceedings. This was the opening, in his own words:

"The most convenient place we could finde to sitt in was the Quire of the Church. Where Sir George Yeardley, the Governor, being sett down in his accustomed place, those of the Counsell of Estate Sate nexte him on both handes, except onely the Secretary, then appointed the speaker and Thomas Pierse, the sergeant standing at the barre, to be ready for any service the Assembly should command him. But, for as muche as men's affairs doe little prosper, where God's service is neglected all the burgesses tooke their places in the Quire, till a prayer was said by Mr. Bucke, the minister, that it would please God to guide and sanctifie all our proceedings to his owne glory, and the good of the planta-

tion. Prayer being ended, to the intente that as we had began at God Almighty, so we might proceed with awfull and due respectes towards his lieutenant our most gracious and dread soveraigne; all the Burgesses were entreated to retyre themselves into the body of the Church, which being done, before they were fully admitted they were called in order and by name, and so every man (none staggering at it) tooke the oathe of Supremacy, and then entered the Assembly—at Captain Ward the Speaker took exception, as at one that without any commission or authority had seated himselfe either upon the Companies and then his plantation could not be lawful or on Captain Marten's lande and so he was but a limbe or member of him and so there could be but two Burgesses for all. So Captain Ward was commanded to absente himselfe till such time as the Assembly had agreed was fitt for him to doe."

"After much debate," it was resolved to admit Captain Warde to a seat because of his personal services to the colony provided he should thereafter and before the next general assembly procure a commission lawfully to establish and plant himself as the chiefs of the other plantations had done.

The burgesses of Captain Martin were then challenged by the governor on the ground that he had in his patent a clause which exempted him from the general laws of the colony, but especially those of the general assembly. Martin declined to waive this clause in his patent and his burgesses were accordingly excluded. Upon a "complainte" being made against Captain Martin because Ensign Harrison, in command of one of his shallops, had with force of arms taken corn from the Indians, this was adjudged in violation of the laws of nations, and it was ordered that in case Martin could not thoroughly answer the charge "he should from henceforth" take leave of the Governor as other men and should putt in security that his people shall comitte no suche outrage anymore." Martin was then summoned to attend before them being addressed as "our very loving friend."

"These obstacles being removed" the speaker made a short address on the occasion of their meeting, which done he read the commission for establishing the "Counsell of Estate and the Gen-

erall Assembly" "wherein their duties were described to the life."

The speaker then read to the Assembly the great Charter or commission of privileges, orders and laws sent through Yeardley from England. These were divided into four parts and the first two were referred to one committee and the other two to a separate committee. The report of proceedings explains this action as follows:

"But some man may here objecte; to what ende we should presume to referre that to the examination of comitties which the Counsell and Company in England had already resolved to be perfect and did expecte nothinge but our assente thereunto. To this we answere that we did not to the ende to correcte or control anything therein contained; but onely in case we should finde ought not perfectly squaring with the State of this Colony or any law which did presse or pointe too harde that we might by way of humble petition seeke to have it redressed; especially because this great Charter is to bind us and our heyers for ever."

This concluded the morning session.

"After dinner," proceeds the chronicler, "the Governour and those that were not of the comitties sate a second time; while the said comitties were employed in the perusall of those two bookes."

The speaker then propounded the following subjects for consideration:

1. The great Charter or Commission of laws, orders and privileges.

2. Which of the instructions given by the Counsell in England to my Lo. La Warre, Capt. Argall or Sir George Yeardley might "conveniently putte on the habit of lawes."

3. What laws might issue out of the private conceit of any of the burgesses or any other of the Colony.

4. What petitions were fit to be sent home for England.

The governor reserved the second subject for his own examination. About three hours were spent in conference over the other subjects, and the report of the committees having been then brought in, the Assembly adjourned till next morning, Saturday,

July 31. On the adjourned day the Assembly agreed that a petition should be sent to the council of the company that the lands which had been previously granted by patent to the ancient planters by former governors, might not now after so much labor and cost and so many years' habitation be taken from them upon the pretext of laying out portions of land for public use.

A second petition was agreed upon to the effect that the company would send out additional men to occupy and cultivate public lands and for other public purposes so that the planters might not be too much drawn from their private business. A third petition prayed that it might be plainly expressed in the great Commission, as indeed it is not, that the ancient planters of both sorts, that is, those who came upon their own charges and those who came upon the company's cost, might have their second, third, and more divisions successively in as large and free manner as any other planters, and also that there should be allowed to the male children of them and all others begotten in Virginia, being the one hope of posterity, a single share apiece and shares for their wives, "because that in a newe plantation it is not knowen whether man or woman be the most necessary."

The fourth petition was "to beseech the Treasurer, Counsell and Company that they would be pleased to appoint a Sub-Treasurer here, to collect their rents, to the ende the inhabitants of this Colony be not tyed to an impossibility of paying the same yearly to the Treasurer in England; and that they would enjoin the said Sub Treasurer not precisely according to the letter of the Charter to exacte mony of us (whereof we have none at all as we have no minte) but the true value of rent in comodity."

The fifth petition prayed that workmen of all sorts might be sent out for the erection of the university and college.

The sixth and last was that "they will be pleased to change the savage name of Kiccowtan, and to give that incorporation a new name."

After disposing of some other matters they adjourned to Monday, August 2d. On the day before, Mr. Shelly, one of the bur-

gesses, died. Two having been excluded, this left the number of burgesses at 19.

On Monday Capt. Martin appeared at the bar and reiterated his refusal to infringe any part of his patent. He pleaded guilty to the charge against his subordinate Ensign Harrison and stated his willingness to give security for the good behavior of his people toward the Indians.

The Assembly then resolved to ask an explanation of the company of the clause in Capt. Martin's patent on the ground that it was obscure and tended to contradict or destroy the uniformity and equality of laws in the colony. They also desired that it should be explained why it was that Capt. Martin claimed 500 acres a share for those ten shares allowed him for his personal adventures and what kind of shares the company meant he should have when they gave him his patent.

And so Capt. Martin was disposed of for the present.

The first general law ever passed in this country (August 2, 1619) was in the following language:

"By this present general Assembly be it enacted, that no injury or oppression be wrought by the English against the Indians whereby the present peace may be disturbed and ancient quarrels might be revived. And farther be it ordained that the Chichominie are not be excepted out of this law; until either that suche order come out of Englande or that they doe provoke us by some newe Injury."

Then followed enactments against idleness, providing: that the plantation to which the idler belonged should appoint the idler a master to serve for wages until he show apparent signs of amendment.

Against gaming at dice and cards, providing that the winners should lose their winnings and both winners and losers should forfeit ten shillings a man, one forfeit going to the discoverer and the balance to charitable and pious uses in the plantation where the fault is committed.

Against drunkenness of private persons, providing that for the first offense they be reproved privately by the minister, the second time publicly, the third time to lie "in boltes" twelve hours in the

house of the Provost Marshall, paying his fee; and if still obdurate, to undergo such severe punishment as the Governor and Counsell shall inflict. In case the offender was an officer, he was first to receive a reproof from the Governor, the second time an open reproof in the church by the minister, and the third time he was first to be committed and then degraded, with the power of pardon in the Governor.

Against excess in apparel "that every man be cessed in the Church for all publique contributions, if he be unmarried according to his owne apparell; if he be married, according to his owne and his wives or either of their apparell."

Then followed provisions enjoining the people from too much intimacy with the Indians, but providing for their religious and civil education. Certain agricultural enactments were then passed looking toward the cultivation of enough corn to provide for the inhabitants and the development of other agricultural industries, such as silk, hemp, flax, anise seed, grapevines, the working of tradesmen for whomever might employ them to be paid according to the quality of their trade and work and the just performance of all contracts made in England between the owners of land and their tenants and servants; against the enticing away of tenants or servants from one plantation to another.

The proceedings of the day wound up with a regulation with reference to the public magazine.

On Tuesday, August 3d, "a third sorte of lawes (such as might proceed out of every man's private conceipt) were read and referred by halves to the same committees which were from the beginning."

Capt. William Powell then brought to the notice of the Assembly the case of a "lewde and trecherous" servant of his, who had not only accused the captain of drunkenness, but had also incited fights and insubordination amongst his fellow servants. The Assembly thereupon sentenced this servant, Thomas Garnett, to stand four days with his ears nailed to the pillary and to be publicly whipped each one of those four days.

"Now as touching the neglecte of his works, what satisfaction ought to be made to his master for that is referred to the Governor and Counsell of State."

It is to be hoped that this severe treatment had a good effect upon Thomas, for certainly the name of Garnett was an honored one afterwards in the history of Virginia.

The afternoon was spent in discussing the report of the committee concerning the "third sorte of lawes."

"Except onely the consideration of the petition of Mr. John Rolfe against Capt. John Martine for writing a letter to him wherein (as Mr. Rolfe alledged) he taxeth him both unseemingly and amiss of certaine things wherein he was never faulty, and besides casteth some aspersion upon the present government, which is the most temperate and juste that ever was in this country, too milde indeed for many in this Colony whom unwoonted liberty hath made insolente and not to know themselves. This petition of Mr. Rolfe was thought fit to be referred to the Counsell of State."

Wednesday, August 4th, was set as the last day of the Assembly ("by reason of extreme heat both paste and likely to ensue and by that means of the alteration of the healthes of diverse of the General Assembly").

They then passed "A third sorte of Lawes, such as maye issue within every man's privat conceipt."

These gave every man the right to trade with the Indians except servants; provided against giving to the Indians English dogs, shot, powder, or other arms; against any man going about twenty miles from dwelling places or upon any voyage requiring absence for seven days without notice to the governor or commander of the plantation; against going purposely to Indian towns, &c., without leave; requiring every man between August 4th and January 1st next to register the name of himself and those of his servants with their terms and conditions of service, including new arrivals; requiring all ministers of the colony to report christenings, burials and marriages and also to read divine service and otherwise act according to the laws of the Church of England and every Sunday

The First Attempt to Settle Staten Island ¹

(In the Light of the Ancient Records)

GEORGE W. TUTTLE

The discovery by Henry Hudson may be considered the first chapter in the history of Staten Island, and the second chapter the first attempts at settlement. It is a part of this second chapter which it is proposed to outline with the aid of contemporary records, some of which have recently become available.

At the time the first colonists came Holland built more ships and her carrying trade was greater than that of any other nation. Amsterdam was the commercial and banking center of the world, and the States General had committed its interests in New Netherland to a great chartered company called the West India Company with headquarters at Amsterdam.

Staten Island was described about 1628 by Isaac de Rasiers as follows: "The west point is an island, inhabited by from 80 to 90 savages, who support themselves by planting maize." (N. N. N. 103.)² It was considered desirable for settlement, however, for Director General Minuit (1626-1631) on August 10, 1630, bought Staten Island from the Indians for Michael Pauw (absent) and paid for it with some duffils,³ kettles, axes, hoes, wampum, drilling awls, jews'-harps, and divers other small wares. (C. D. 12: 2; M. P. 122.)

Pauw, apparently, never entered upon his purchase or did anything with his Staten Island property, and in 1637 the directors of

¹ Read at the meeting of the Section of Historical Research April 6, 1917.

² See Literature cited, p. 23.

³ Duffil (obsolete spelling), duffle. A kind of coarse shaggy woolen cloth usually referred to Duffel, a town near Antwerp. "The clothing of the Indians as well of men as of women consists of a piece of duffels . . . around the body . . . which they obtain in trade from the Christians." (C. D. 1: 281.)

the West India Company succeeded in purchasing it from him. (B. 1: 268.)

The first attempts at settlement on Staten Island were due to two men, David Petersen DeVries of Hoorn, and Cornelius Melyn of Antwerp, both fearless, able, and influential men of affairs of the type that had made Holland the foremost nation in the world. We are fortunate that they recorded their observations and experiences so fully and that these records have been preserved.

David Petersen DeVries tells us in "My Third Voyage to America and New Netherland in order to plant a colony upon Staten Island for myself and Frederick DeVries, Secretary of the City of Amsterdam and a manager of the West India Company, undertaken at his request," of his attempt to plant a colony on Staten Island. He says: "The 13th [of August 1636] I requested Wouter Van Twilliger⁴ to register Staten Island for me, as I wished to return and plant a colony upon it, which he consented to do" (N. N. N. 199), and again on December 26, 1638, he relates, "So I brought the ship that same evening before Staten Island, which belonged to me, where I intended to settle my people." (N. N. N. 201.)

"*Anno 1639 The 5th of January,*" he writes, "*I sent my people to Staten Island to begin to plant a colony there with assistance to build*" (N. N. N. 202), and on August 20, 1641, he calls his colonists, "*the first occupants.*" On January 7, 1640, DeVries leased his Staten Island plantation with buildings to Thomas Smythe, from Jan. 1, 1640 to Jan. 1, 1646, according to the official records (C. D. 13: 7), and in his notes on the 10th of February [1640] DeVries states "I leased out the plantation on Staten Island, as no people had been sent me from Holland as was stipulated in the contract I made with Frederick DeVries, a manager of the West India Company." (N. N. N. 205.)

We are told that on the 16th day of July [1640] Cornelis Van Thienhoven, secretary of New Netherland, with 100 armed men was sent to the Raritan Indians to obtain satisfaction from the

⁴ Wouter Van Twiller, Director General 1633-1638.

Indians for hostilities by them upon Staten Island in killing DeVries' swine and those of the company, in robbing the watch house, and for other acts of insolence. The troops became unruly, and in disobedience of orders killed several of the Indians and brought back the brother of the chief a prisoner. (N. N. N. 208.) Whereupon the Indians murdered four tobacco planters and set fire to the dwelling and tobacco house "on the plantation of Messrs. DeVries and David Pietersen partners⁵ situate on Staten Island." (O'Cal. 28; N. N. N. 208.)

DeVries evidently did not have a very secure claim to Staten Island, for on July 3, 1640, the directors of the West India Company gave Cornelis Melyn permission to establish a colony on Staten Island and acknowledged him as its patroon. (C. D. 13: 200.) DeVries notes on August 20, 1641, the arrival of Melyn who claimed that Staten Island belonged to him, which DeVries says he could not believe as he thought better things of the managers. (N. N. N. 211.)

Again, DeVries writes, "The 1st of September [1641] my men on Staten Island were killed by the Indians; and the Raritans told an Indian, who worked for my people, that we might now come to fight them on account of our men; that we had before come and treated them badly on account of the swine; that there had been laid to their charge what they were not guilty of, and what had been done by the company's men when they were on their way to the South River, who came ashore to cut wood and haul water, and then at the same time stole the hogs, and charged the act upon the innocent Indians, who, although they are bad enough, will do you no harm if you do them none. Thus I lost the beginning of my colony on Staten Island by the orders of Commander Kieft [Director General 1638-1647] who wished to charge upon the Indians what his own people had done." (N. N. N. 211.)

DeVries did not give up his rights on Staten Island at this time, however, for he says that on November 2, 1641, "Commander

⁵ Frederick DeVries and David Pietersen (DeVries).

Kieft asked me whether I would permit Melyn to go upon the point of Staten Island where the maize land lay, saying that he wished to let him plant it; and that he would place soldiers there, who would make a signal by raising a flag, to make known at the fort whenever ships were in the bay, to which I have consented—but am not to be prejudiced thereby—and to let him have twelve to fourteen or fifteen morgens⁶ of land, without abridging my right, as he intended to distil brandy and make goats leather.” (N. N. N. 211.)

The location of this plantation or *bouwerie* of DeVries, which apparently did not attain to the dignity of a *colonie*, has until recently been in doubt. Anthon and others have located it at “Oude Dorp,” while tradition has placed it in the vicinity of the Borough Hall, New Brighton, so Mr. Wm. T. Davis informs the writer, and Clute in his *Annals of Staten Island* states (p. 31): “Tradition says that one of the first dwellings on the Island was situated on the heights at New Brighton.” The Manatus map of 1639, a facsimile of which is now presented to the Association, removed this doubt and definitely fixes the location of DeVries’ plantation at Tompkinsville, at or near the Watering Place, where vessels on their way to sea stopped for wood and water.⁷

The Watering Place is shown on the 1797 map of Staten Island.⁸ It is described as “the small rivulet called the watering place” and shown in detail on Map of Quarantine Property 1799.⁹ This rivulet not now existing, fed it is said by a spring, was less than 200 feet north of Arietta Street, Tompkinsville, and its outlet was a short distance east of the S. I. R. T. Railway. It is quite probable that the entire neighborhood of this outlet became known as

⁶ Morgen, about 2 acres.

⁷ “The outward bound vessels usually stop at the watering place under Staten Island, to lay in a sufficient supply of wood and water which are easily obtained at that place.” Van der Donck, *Description of New Netherland 1655* (Collections of N. Y. Historical Society, Ser. 1, p. 125-242).

⁸ A copy of this map is in the Association’s collection.

⁹ Filed in the office of the County Clerk as Map No. 1.

the Watering Place. The location of DeVries' plantation in the vicinity of the Watering Place would also be indicated by the Indian version of the stealing of the hogs, as well as from the fact that shipping stopped there, that it was most accessible to New Amsterdam where DeVries probably lived, and that the land to the south was tolerably level, fertile, and well watered, suitable for raising tobacco or maize. In other words, it is such a site as a shrewd man like DeVries would select for his colony.

The early maps of Staten Island gave few local names, and this 1639 map is one of the first if not the earliest to bear the name Staten Island. Perhaps it is the only Dutch map in existence made previous to the English conquest to show any plantation, colonies, or towns on Staten Island. The Dutch cartographers were content to show topographical features and the name of the island. The names usually appearing are Hamels Hoofden,¹⁰ and often Hoofden [Headlands] is applied to the bluffs on each side of the Narrows, or sometimes the Staten Island side is called *west houck*¹¹ and the Long Island side *oofte houck*. R. Achter Kol also appears on maps as early as 1621. Staten Lant and I. State appear on maps probably earlier than 1639, but the island to which these names refer is not recognizable.

The copy of the Manatus map of 1639 in the Library of Congress, of great importance in the early history of New York City, depicts the state of affairs in 1639 as we find from the reference to numbers 2, 3, 4, 5, and 6.¹² Another copy of the map has been found in the villa Costello near Florence, which is owned by the Italian government. It is made on the same kind of paper and with only such differences from the other copy as may be attributed to errors in copying.

A thorough investigation indicates that both maps were copied in Holland between 1660 and 1670 from the original, now lost,

¹⁰ The Narrows. Named after Hendrik Hamel, a patroon.

¹¹ *houck*, cape.

¹² "Five run down bouweries of the Company, which stand idle, whereof now A° 1639, three are again occupied."

made in 1639. Joan Vingboon, a cartographer of Amsterdam, is reputed to be the author, but his connection with the map is not certain. The map was practically unknown when the owner, Henry Harisse, exhibited the Library of Congress copy in Paris in 1892. Harisse by will gave the map to the United States Government and it was received by the Library of Congress a short time ago. It is believed to be the earliest map of New York and vicinity showing settlements or other features except in the most general way.

This Manatus map is interesting in many particulars, locating as it does nearly fifty plantations, farms, etc., in what is now New York City, including "the commenced farm of Jonas Bronck," but its chief interest to us at this time is its indication of a plantation on Staten Island near the shore and east of the hills that form the backbone of the island. This plantation is evidently at Tompkinsville in the immediate vicinity of the Watering Place of early days. While no reference number is given to the Staten Island plantation on the Library of Congress copy, the Costello copy has the number 33, to which corresponds in the Costello copy *Plaṅ van Daudt pieters* and in the Library of Congress copy *Plaṅ van Davidt Pietter*.¹³ Now David Petersen DeVries was often referred to in the old records as David Pietersz or Pietersen, the surname being omitted, and it is clear that DeVries' plantation of 1639 on Staten Island is delineated on the map.

This map is in excellent condition, 26 $\frac{5}{8}$ " x 18 $\frac{1}{4}$ " in size and drawn to a scale of about 1 $\frac{1}{2}$ miles to an inch. Both the Library of Congress copy and the Costello copy have been reproduced in Vol. 2, plates 41 and 42, of "Iconography of Manhattan Island" by I. N. Phelps Stokes, New York 1916, and the Library of Congress copy is reproduced in "Manhattan 1624-1639" by Edward Van Winkle, New York 1916. Both of these publications describe the map as well as the plantations and farms indicated thereon.

¹³ *Plaṅ* is evidently an abbreviation for plantation. *Pietter* is no doubt an abbreviation for Pietersen.

A distinction is made between a plantation and a farm or *bouwerie*. According to Van Winkle the plantations were generally only a few acres in size, rarely exceeding five, and indian corn or tobacco were the crops raised, tobacco for the market and maize for the food of man and beast. (C. D. 1: 367.) Farms or *bouweries* were much larger, and a greater variety of agricultural products were grown. A colonie was made up of families settled on contiguous plantations or *bouweries* and the founder was usually acknowledged a *patroon*. (C. D. 1: 119, 181.)

Those interested in the beginning of Staten Island should read DeVries' account. (N. N. N. 181.) He tells of six voyages, three of which were to New Netherland. After bringing his settlers to Staten Island, DeVries remained in New Netherland for several years. He believed in a friendly policy toward the Indians and blamed Director Kieft for the many difficulties with them.

Kieft was very aggressive in his policy toward the red men, and committed a great blunder in 1639 when he demanded tribute from them in maize, furs, or service, on the ground that the Dutch had defended them against their enemies. (C. D. 1: 150, 197.) There were a number of other sources of irritation, among which was the damage done to the Indian corn fields by stray cattle of the colonists. After numerous complaints, the Indians retaliated by killing some of the cattle. (C. D. 1: 150.) Kieft was much alarmed when one of his men was murdered by an Indian, and wishing to shift the responsibility for the consequences of his policy upon the settlers, he summoned all masters and heads of families to meet at Fort Amsterdam and submitted to them the question of the punishment of the Indians.

Twelve selectmen were chosen to consider the matter in August 1641 and DeVries was made president. They answered on August 29, 1641, that the murderer should be punished and that the punitive expedition should be led by Kieft. (C. D. 1: 415.) The twelve men also took the opportunity to ask for reforms in administration and asserted a right to share in the government. (C. D.

1: 201.) Kieft, however, became jealous of his prerogatives and on February 8, 1642, ordered the twelve men to hold no further meetings on pain of being punished "as the same tends to dangerous consequence." (C. D. 1: 203.)

DeVries was a patroon and founded several colonies beside the plantation on Staten Island. He was a good churchman and did much toward building the church in the fort. (N. N. N. 212.) He appears to have made his home in New Amsterdam when not away on exploring or trading expeditions, and it is improbable that he lived on Staten Island at any time or had any other than a commercial interest in the place. In the fall of 1643 the bouweries where DeVries had attempted to establish colonies all lay in ashes as the result of the Indian War of 1643 (C. D. 1: 151, 185, 190), and DeVries, on account of his losses, decided to return to Holland for good. The suffering province, says Brodhead, lost one of its best citizens. (B. 1: 370.)

DeVries relates that on the 8th of October 1643, "in taking leave of William Kieft, I told him that this murder which he had committed on so much innocent blood¹⁴ would yet be avenged upon him and thus I left him." (N. N. N. 234.)

DeVries the same day sailed for Virginia on his way to Holland, where in 1655 he published his notes. Nothing further is recorded, so far as known, in reference to his claims on Staten Island, which we may infer lapsed or were acquired by Cornelis Melyn, who commenced his colony August 20, 1641, since Melyn about 1661 wrote that Staten Island has not been occupied by anybody else but himself and those who received his permission. (M. P. 122.)

¹⁴ Slaughter of the Indians on the night of the 24th and 25th of February 1643, when with the approval of Kieft some 80 were killed, while not suspecting danger, after having fled to the Dutch for protection from other Indians. This massacre was the principal cause of the Indian War of 1643 (C. D. 1: 151).

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French Draught of a Part of Staten Island in the Vicinity of Great Kills¹

GEORGE W. TUTTLE

"La grand Kil," the only place name on the map, at once suggests the locality represented, to anyone familiar with what we know as Great Kill, and this opinion is confirmed by examination of the stream and marsh lines shown on the map.

When the writer visited this locality with this French map in hand, on arriving at the Guyon House² he noted at once the orientation of that ancient house (said to have been erected in 1675). It squarely faces down the point of land to the south precisely as shown on this old map. He also observed that the field southeast of the house and between it and Mill Road, planted in corn when visited, corresponds with the enclosed area adjoining the house as delineated on the map, both in size and location. The Mill Road along the edge of the marsh bounds this area on the east and south.

Marshes both to the east and to the west of the Guyon House are to be found, as well as the island at the southerly point of land which the Guyon House faces, and on which a Lake House of later date is located, in close agreement with this ancient document.

We may be confident therefore that this map shows the present Guyon House, or an earlier one in substantially the same place and having the same orientation.

A comparison of this map with Vermeule and Bien's map of Staten Island, 1890, which is about three-fourths the scale of the copy in the archives of the Association, also makes it quite certain

¹ Read at the annual meeting of the Section of Historical Research.

² Original in Land Papers, Vol. I, p. 99, Office of the Secretary of State, Albany, N. Y. The map is not dated but it was with papers dated 1676, and nothing appears to make this date improbable. A photostat copy is among the archives of the Association.

³ See The Guyon House, by Edward C. Delavan, Jr., PROC. STATEN IS. Assoc. Feb. 1916.

that the house and the adjoining enclosure about 600 ft. square were where the Guyon House now stands. It is quite probable that the enclosed area may have been the cultivated field which would require protection from the cattle that ran at large. The point of upland extending from near the top toward the bottom of the map is evidently that running down to Lake's mill, and the small island on which the Lake House is situated is noticeably similar on both maps as well as the points of upland to the west.

Mill Creek, immediately to the west of the above-mentioned point, with its bends and branches, is also noticeably similar on both maps, and Lockman's Creek next to the west, and Duck Creek still farther west, can readily be identified. The creek shown to the east of the central point of land above mentioned seems to be Bass Creek, which then had a direct outlet to the bay, since cut off by the shifting sands.

Oyster Island shown on the map helps to determine the growth of the point which has apparently extended to the south since 1676, perhaps two-thirds of a mile, and the shore line forced inward by some 500 feet. As the map is more or less sketched, these figures however cannot be regarded with any degree of confidence.

The line perpendicular to the top of the sheet is evidently the meridian line, and the line pointing toward the northwest is in the direction of Guyon's westerly property line. It may be intended to represent that line. The villages are sketched in entirely out of scale to show within the limits of the map that villages near at hand are in the direction indicated. The village shown at the easterly margin of the map is clearly New Dorp, and the one to the north can hardly be explained except that it is intended to represent Stony Brook, which was on the stream leading into Mill Creek.

Cortelyou was ordered to lay out the meadow land at Great Kill into ten-acre plots, and the records show that they were laid out in numbered lots. Real estate maps and the numerous ditches shown on the 1890 map mentioned above indicate how they were

probably laid out. Surveys show that at least some of these lots were cut into halves, which may mean that "la ligne" on the map was the line cutting them in two, or possibly the area on one side was allotted to one village and the area on the other side to the other village. Marsh land at that time had a considerable value and to each lot in the town was usually assigned a suitable proportion of salt marsh.

A considerable error in direction must have arisen in sketching in Crookes Point (called on the map "pointe de sable") and the shore line, or else, and more likely, the marginal portions of the sketch were forced to fit the sheet of paper.

The handwriting has been compared with a photograph of Cortelyou's signature and they do not appear distinctly different. Cortelyou may have made the sketch, but it is quite as likely it was done by a Frenchman, as Cortelyou's maps on record are not in French. However, according to the Land Papers, Cortelyou executed a survey for Guyon in 1676.

The map describes the character of the land with considerable care.⁴ It is worthy of notice that while the creeks and marshes have changed very little in the 240 years since the map is believed to have been made, the woods have disappeared and the upland has been considerably altered by cultivation and improvements.

⁴French terms describing the use of the land are as follows: *bois*, wood; *foin sale*, salt hay; *foin doux*, fresh hay; *roseau*, reed.

Early Documents Relating to the Manor of Bentley and the Billop House¹

GEORGE W. TUTTLE

(WITH PLATES I AND 2)

The earliest record concerning Capt. Christopher Billop,² the founder of the Manor of Bentley, appears to be that of July 2, 1674, when he was commissioned to be Lieutenant of Major Andros' Company.³

Robert Ryder made a map of Staten Island, Long Island, etc.,⁴ dated 1670, although some of the names on the map would indicate a date later by about six years. Among the names is that of Billop. A house is delineated as belonging to him, in the position of the existing Billop House, as near as one can tell.

Capt. Billop must have been in possession of the south end of Staten Island as early as 1675, for the Council Minutes read as follows: "At a Councell Aug. 5, 1675, The Neck of Land Capt.

¹ Read at the meeting of the Section of Historical Research Jan. 13, 1917.

² For accounts of Capt. Christopher Billop and the Manor of Bentley, and records concerning them, see:

Clute, J. J. *Annals of Staten Island*. N. Y. 1877.

Morris, I. K. *Memorial History of Staten Island*. N. Y. 1898-1900.

Billopp, C. F. *A history of Thomas and Anne Billopp Farmer*. N. Y. 1907.

Col. Doc. *Documents Relating to the Colonial History of the State of N. Y.* V. 3, 12, and 13. Albany 1853-1887.

Records 1680-1760 Richmond County, in Office of the Clerk of the County of Richmond. (Copy in Stilwell, J. E., *Historical and Genealogical Miscellany*, v. 1. N. Y. 1903.)

PROCEEDINGS OF THE STATEN ISLAND ASSOCIATION OF ARTS AND SCIENCES. *Calendar for 1910*. Title Guarantee and Trust Co.

³ Col. Doc. 3: 221. 1853.

⁴ Manuscript map by Robert Ryder dated 1670, owned by the New York Historical Society. (Photographic copy in library of Staten Island Association of Arts and Sciences.)

Billogg is upon is judged to bee about 1300 acres; Ordered, That he have the whole Neck allowing halfe to be divided into Lotts, ye rest to be allowed for Commonage, so to be entyre unto him, but then he to have no Commonage upon y^e rest of y^e Island—That a survey thereof be made to know the true extent.”⁵

An undated survey, probably 1676, entitled “Description of a neck of land upon Staten Island laid out for Christopher Billog by Robert Ryder surveyor” [with draught] is on file in the office of the Secretary of State in Albany.⁶ A photograph of this draught is herewith presented (PL. 1). A certificate on this survey by the surveyor Robert Ryder, who executed many surveys on Staten Island, reads as follows: “By vertue of a warrant ffrd bye Right Honorable Major Edm^u Andros Govuno^r of all his royal Highnesses Territory in America. For bye running out of a neck of Land upon Staten Island ffor Capt. Christopher Billip, w^{ch}; neck of Land lies in fforme bye above ffigures & contains nine hundred thirty two acres Ro. Ryder.” The survey is also signed Ja. Cortelyou Surv.^r gl. Within the outlines of the survey is the description in Dutch. A building is indicated on the property apparently in about the position of the existing Billog House. The mouth of Mill Creek is also depicted as well as the creek near Ward Point.

A patent was granted to Capt. Christopher Billog on the 25th of March 1676 for the above-described land and it is clear from this patent that the above is the survey referred to therein. The survey therefore antedates the patent.

A copy of the “Patent and Confirmation granted unto Capt. Christopher Billog for a Tract of Land upon Staten Island” dated March 25, 1676,⁷ is submitted herewith (p. 32).

Mill Creek is referred to as the “Creeke which lyes over against the land belonging to Mr. Gabriel Minvielle.” The description of

⁵ Col. Doc. 13: 485.

⁶ Land Papers in the Office of the Secretary of State, Capitol, Albany, N. Y. V. 1, p. 163.

⁷ Record of Patents in the Office of the Secretary of State, Capitol, Albany, N. Y. V. 4, p. 97 (old 101).



Ryder survey for Christopher Billop, with certificate.



Welles survey for Christopher Billop.

the property begins just north of its mouth and continues along the shore around the south point of Staten Island to the "East Side of a Great Pond lying under a High Hill, the nearest to Regreniers Creeke." Regreniers Creek is now known as Lemon Creek, the High Hill is the bluff on which Princes Bay Lighthouse stands, and the "Great Pond" is the one near the shore between this bluff and Sharrott Avenue. Sharrott Av., one of the ancient roads of the island, was formerly known as Christopher Billops Road.

Jasper Danckaerts, in his journal 1679-80, under date of Oct. 12, 1679, says: "Proceeding thus along, we came to the West point where an Englishman lived alone some distance from the road."⁸ This Englishman we believe was Capt. Christopher Billop.

On Jan. 28, 1687, was recorded a "Description of a survey of 1600 acres of land lying upon ye west end of Staten Island beginning upon the north side of a certain creek opposite to the land of Gabriel Manuealle, crossing said creek, and so running by the main river to the bay, laid out for Christopher Billip by Philip Welles Surveyor" [with draught].⁹ This draught, a photographic copy of which is presented (PL. 2), is a fair representation in outline of the southern portion of Staten Island. Lemon Creek and the marsh land surrounding it is shown. The land of William and Peter Johnson laid out Oct. 31, 1677, and the Christopher Billop Road, now Sharrott Av.,¹⁰ which marks the eastern limit of the Manor of Bentley patent, are also delineated.

The Billop property is entitled "The Land of Capt. Christopher Billip." The tidal flats south of the Billop property are indicated as well as the creek just north of Ward Point. Two buildings, apparently the existing Billop House and the barn (which was destroyed about 1897), are shown enclosed, and are located in

⁸ Danckaerts, Jasper, Journal of, 1679-80, p. 73. N. Y. 1913.

⁹ Land Papers 2: 210.

¹⁰ The patent granted by Edmond Andros to William and Peter Johnson Sep. 29, 1677, contains the following description: "West from the Creek one hundred and thirty roods to the Highway of Capt. Christopher Billop Ranging north by the Highway" [Sharrott Av.] etc. (Liber D, deeds, Richmond Co., p. 103).

their proper relative positions but considerably to the south of their true positions. This is probably an error in delineation. Both the Ryder map and the 1676 map, as we have seen, show a house in the present position of the Billop House. It is to be noted that range lines 40 chains or one-half mile apart are shown on the map, and the origin of this system of rectangles appears to be the Billop barn. Mill Creek and the surrounding marsh is shown as well as land of Anthony Fountaine, Mathew Larew, Mark Dissosway, and Obadiah Holmes. The road shown at the east end of the Fountaine, Larew, and Dissosway properties apparently was not built, as it corresponds with no road shown on the 1781 map of Staten Island¹¹ or any since that time. The draught is "Laid Downe by A scale of 20 chains to an inch." A dot and dash line, north 45° west, is drawn from the foot of Sharrott Av. to the westerly shore, and is evidently intended to represent the northeasterly limits of the patent of 1676.

The above survey and draught was evidently made with a view to the issuance of a patent for the property. A copy of the patent for the Manor of Bentley issued May 6, 1687,¹² is submitted (p. 33).

The "Creeke opposite to the land of Gabriel Minvielle" is Mill Creek at Richmond Valley. "The Highway left by the land of Anthony ffountaine" is evidently Richmond Valley Road. "A pond by the Highlands next to Regroons Creek" is evidently the pond between Princes Bay Light and Sharrott Av.

These surveys of 1676 and 1687 have been plotted on a modern map of Staten Island, and their relation to existing landmarks brought out. (A copy of this map accompanies this paper.) It will be noticed that the survey of 1676 contained 932 acres, while the second survey contained 1600 acres, yet both patents, based

¹¹ A map of New York and Staten Island and Part of Long Island surveyed by order of General Sir Henry Clinton 1781. Original in British Museum. Photograph in Crown Collection of American Maps, v. 5, No. 22. A. B. Hulbert, Cleveland, Ohio, 1908.

¹² The writer is indebted to E. C. Delavan, Jr., for the use of copies of the Billop patents.

apparently on these surveys, began near the same point north of Mill Creek and extended along the south shore to the same point. Apparently it was intended to include in the 1676 survey the area southwest of the dash line running from the foot of Sharrott Av., which is more than 1600 acres,¹³ but the actual survey as recorded, 932 acres, shown by weak dash lines on the map, includes only the area west of a line drawn from the foot of Beach Street to the foot of Church Street.

The boundary of the Manor of Bentley patent, granted in 1687, it will be seen, begins at Richmond Valley Road and Arthur Kill. It then follows Arthur Kill and the south shore to the foot of Sharrott Avenue, then north on Sharrott Avenue to the creek just south of the railroad, thence in a straight line to a property corner at Weir Avenue west of the Mt. Loretto RR. siding, and then along property lines and Richmond Valley Road, as indicated, to Arthur Kill.

While these documents do not prove that the present Billop House dates from 1676 or earlier, they make it plain that a building occupying substantially the same position was there. This building was quite likely the Billop House now standing.

One would think that such a keen observer as Danckaerts would have mentioned the house in his journal, if such a substantial and unusual structure for those times had been built at the time of his visit in 1679. On the other hand the indication of the structure on the survey of 1676 tends to show that the house there represented was an unusual and substantial one.

On Oct. 9, 1677, Capt. Christopher Billop sold to his brother Joseph Billop a house in Beverly, England, for 600 pounds.¹⁴ It

¹³ The area of the Billop property as shown on the survey of 1687, measured from a photograph of that survey, is 1775 acres.

The area of the Manor of Bentley as described in the patent of 1687 and plotted on the modern map submitted herewith is 1868 acres, and the area southwest of the dash line running northwest from the foot of Sharrott Av., as shown on this map, is 1810 acres.

¹⁴ Pennsylvania Archives, Second Series 5: 702.

is the belief of Chas. Farmer Billopp that the funds thus received were used in constructing the Billop House on Staten Island.

The depiction of the Billop House and barn on the 1687 survey for the Bentley Manor patent in the same relation to each other as in recent years, however, makes it practically certain that the present Billop House was in existence at that time.

It is believed that Capt. Billop built this house previous to 1687 substantial and large enough to sustain the dignity of the Manor in anticipation of the grant to him of the full manorial rights and privileges accorded to him in the patent of 1687.

A PATENT AND CONFIRMATION GRAUNTED UNTO CAP^t. CHRISTOPHER BILLOP FOR A TRACT OF LAND UPON STATEN ISLAND

Edmund Andros, Esq., etc.,	}	[Patent
to		Dated 25th March 1676
Capt. Christoph ^r Billop	}	Rec. 4 Patents 97-98 (Old p. 101)]

Whereas there is a Certaine Parcell or Tract of Land within a Neck upon Staten Island the which by vertue of a Warrant hath been laid out for Capt Christopher Billop lying and being on the South west side of the said Island beginning on the North side of a Creeke which lyes over against the Land belonging to M^r. Gabriel Minvielle in the Province of New Jersey so running with the West side alongst the great Kill to the Bay then forward with the South side alongst the said Bay to the East side of a great Pond lying under a High Hill the nearest to Regreniers Creeke and from thence Stretching with a North west Line to the North side of the aforesaid Creeke over against M^r. Minviells Containing the quantity of nine hundred thirty two acres As also thirty Acres of Salt Meadow lying on the North East side of the Land laid out for Francis Lee neare Smoaking Point as by the returne of the Survey under the Hand of the Surveyor Gen^{all}. doth and may appeare. Now Know Yee That by vertue of the Commission and Authority unto mee given by his Royall Highnesse I have Given and Graunted and by these presents do Give and Graunt unto Capt Christoph^r. Billop his Heires and Assignes the afore recited Parcell or Tract of Land Meadow Ground and premisses with all and Singular the Appurtenances To have and to hold the said Parcell of Land Meadow Ground and premisses unto the said Capt Christopher

Billop his Heires and Assignes unto the proper use and behoofe of him the said Capt Christopher Billop his Heires and Assignes forever Hee making Improvement of the said Land according to Law, and continuing in obedience and Conforming himselfe according to the Lawes of this Government and Yeilding and Paying therefore Yearely and every yeare unto his Royall Highnesse use as a Quitt Rent Twenty Bushells of good Winter Wheat unto such Officer or Officers in Authority there as shall bee Empowered to receive the same Given under my Hand and Sealed with the Seale of the Province in New York the 25th. day of March in the 28th. Yeare of his Ma^{ties}. Reigne Annoq Dñi 1676.

E. ANDROSS

Record 6 Patents 229-234 (Old p. 230-234) (Bentley Manor patent 1687)

Recorded for Cap^t. Christopher Billop

Thomas Dongan Cap^t. Gen^l. Govern^r. in Chiefe and Vice Admirall in and over the Province of New Yorke and Territoryes Depending thereon in America under his most Sacred Majesty James the Second by the Grace of God King of England Scotland ffrance and Ireland Defender of the faith etc: To all to whom these Presents shall come Sendeth Greeting Whereas Phillip Welles Esq Surveyor Generall hath by my Order Surveyed and Layd out for Cap^t. Christopher Billop a Certaine Neck of Land being Scituate and Lyeing upon the West end of Staten Island in the County of Richmond and knowne by the Name of . . . Beginning upon the North side of a Creeke Opposite to the Land of Gabriel Minvielle and to the South of the Highway left by the Land of Anthony ffountaine Crossing the Creeke and so Runns by the maine River to the Bay and so by the Bay to A Pond by the Highland next to Regroons Creeke to a marked Tree upon the Beach and on the East side of the Pond and so Stretching in Woods by a Line of Marked Trees which is the West Bounds of the Land of William Johnson North halfe a Point Westerly Seventy Chains to a Small Brooke which is the South Bounds of the Land of Obadiah Holmes and so by the Runn but upon a Streight Line Westerly to the Southeast Corner of the Land of Anthony ffountaine and so by the Highway marked out by his Land to the River or Sound where first begunn including all the Meadow about the Creeke Except three Acres belonging unto the Land of

Anthony ffountaine the whole being bounded to the North by the Land of Obadiah Holmes and Anthony ffountaine to the West by the River or Sound to the South by the Bay and to the East by the Land of William Johnson the whole Contained within the afore-recited Bounds both Hills Valleys Swamps Marshes and Meadows Containes one thousand six hundred Acres and Likewise to have thirty Acres of Salt Meadow to be Layd out in that Body of Meadows Against Smoaking Point neer the fresh kills And Whereas the said Christopher Billop hath made Application unto me for a Grant of the said Neck of Land Meadow and Premisses under the Seale of the Province and that the before mençoned Premisses may be Erected into one Lordship or Mannor Now Know Yee that for Diverse Good and Lawfull Consideraçons me thereunto moving and for the Quitt Rent hereafter Reserved I the said Thomas Dongan by Vertue of the Power and Authority to me Derived from his most Sacred Majesty and in Pursuance of the same Have Given Granted Ratifyed Released and Confirmed and by these Presents Do Give Grant Ratifye Release & Confirme unto the said Christopher Billop his Heires and Assignes all the before-mençoned Neck of Land Meadow and Premisses unto Low Water marke as also all the Messuages Tenements Buildings fences Orchards Gardens Pastures Meadows Marshes Woods Underwoods Trees Timber Quarryes Rivers Rivoletts Brookes Ponds Lakes Streames Creecks Harbours Beaches fishing fowling hawking hunting and Oystering Mines Mineralls (Silver and Gold mines only Excepted) Mills Milne Dames and all the Rights Members Libertyes Priviledges Jurisdiççons Royalties Hereditaments Profitts Advantages & Appurtenñces whatsoever to the same belonging or in any wise Appurtaining or Accepted Reputed taken known or Occupyed as Part Parcell or member thereof And Moreover by Vertue of the Commission and Authority to me the said Thomas Dongan Given and the Power in me resideing and for the Reasons and Consideraçons above recited I have and by these Presents Do Erect make and Constitute the said Tract and Neck of Land & Premisses with their and every of their Appurtenñces into one Lordship and Mannor to all intents and Purposes and the same shall from henceforth be Called the Lordship and Mannor of Bentley and I the said Thomas Dongan have also Given and Granted and by these Presents Do Give and Grant unto the said Christopher Billop his Heires and Assignes full Power and Authority at all times forever hereafter in the said Lordship and Mannor one Court

Leet and one Court Barron to hold and keep at such time and times and so often Yearly as they shall see meet and all fines Issues Amerciaments at the said Court Leet and Court Barron to be holden within the s^d. Lordship and Mannor to be Sett forfeited or Imposed and Payable or happening at any time to be Payable by any of the Inhabitants of or within the said Lordship or Mannor of Bentley or the Limitts or Bounds thereof and also all and every the Powers and Authorities herein beforemenconed for the holding and keeping the said Court Leet and Court Barron from time to time and to award and Issue out the Customary Writts to be Issued and Awarded out of the said Court Leet and Court Barron to be kept by the said Christopher Billop his Heires or Assignes forever or his or their Stewards Deputed & Appointed with full and Ample Power and Authority to Straine For the Rents Services and other Sumes of Money Payable by reason of the Premisses and all other Lawfull remedies and meanes for the having Possessing Receiving Levying and enjoying the Premisses and every Part and Parcell of the same and all wastes Strayes Wrecks Deodands Goods of fellons happening and being forfeited within the said Lordship and Mannor and of all and every Summe and Sumes of Money to be Payd as a Post fine upon any fine or fines to be Levied of any Lands Tenements or Hereditaments within the said Lordship or Mannor of Bentley together with the Advousen and Right of Patronage and all and every the Church and Churches Erected or to be Erected or Established in the said Mannor And Lastly I the said Thomas Dongan by Virtue of the Power and Authority aforesaid to me Derived and in Pursuance of the Same Do Give and Grant unto the said Christopher Billop his Heires or Assignes that all the Tennants of the said Mannor shall and may at all times hereafter meet together and Choose Assessors within the said Mannor According to such Rules wayes and Methods as are Prescribed for Cittyes Towns and Countyes within the Province by the Acts of the Generall Assembly for the Defraying the Publick Charge of Each respective Citty Towne and County and all such Sumes of Money so Raised to Collect and Dispose of and for the use aforesaid According as in the said Act of Generall Assembly is Established and Directed To have and to hold all & Singular the said Mannor of Bentley and Premisses with their and every of their Appurtenances unto the said Christopher Billop his Heires and Assignes forever to the only Proper use benefite and behoofe of him the said Christopher Billop his Heires and Assignes forever to

bee holden of his most Sacred Majesty his Heires and Successors in ffree and Comon Soccage According to the tenure of East Greenwich in the County of Kent in his Majestyes Realme of England Yielding Rendring and Paying therefor Yearly and every Yeare forever unto his most Sacred Matye aforesaid his Heires and Successors or to such Officer or Officers as from time to time shall be impowered to Receive the Same if Demanded five Bushells of Good Winter Merchantable Wheate on the five and twentyeth Day of March at the Citty of New Yorke in Liew and Stead of all Services Dutyes and Demands whatsoever In Testimony whereof I have Caused these Presents to be Recorded in the Seċryes Office and the Seale of the Province to be hereunto affixed the Sixth Day of May 1687 and in the third Yeare of his Majestyes Reigne

By Comand of his Exċye

Is: SWINTON

THO: DONGAN

May it Please yo^r. Exċye

The Attorney Gen^l. hath Perused this Patent and finds nothing Contained therein Prejudiciall to his Majestyes Interest

Exa^md y^e. 6th. July 1687

W: Nicolls

Att a Councill held the 6th. June 1687

Present

His Exċye the Gov^r.

Major Brockholls

Major Phillips

Major Cortlandt

Coll Bayard

Judge Palmer

This Patent was Approved off

Is: SWINTON C^l Council

The Town of Dover upon Staten Island ¹

This important paper was published in the *Quarterly Journal of the New York State Historical Association* July 1921; a brief abstract, giving the principal conditions only, is therefore printed here.

GEORGE W. TUTTLE

(WITH MAP)

(Abstract by C. W. LENG)

Some of the English maps of Staten Island prior to 1730 show a town or village by the name of Dover located on the south shore some distance west of the Narrows. On maps of 1676, 1677, and 1690 it is the only settlement shown; and in some of the earliest English court records, viz.: 1671, 1672, 1673, 1676, it is treated as the political center of Staten Island. It has been suggested that the name was given from some fancied resemblance between the hills at the Narrows and the cliffs of Dover, England. Its original location was identical with that of Old Town. This is shown by an inventory of the estate of Walraven Luten, one of the original Huguenots of Old Town, dated at "Dover on Staten Island"; by other court records involving Stilwell, Martino, Marlett, Billeau, Brittain, all early settlers at Old Town, but related in these records to Dover.

While the identity of Old Town, the Dover of the early court records and the earliest English maps, is established, there remains to be considered the Dover of some later maps, viz.: 1684, 1690, 1708, 1764, located at the head of the Great Kill and a little west of the present New Dorp. It is known from Danckaerts' 1679 three days' journey through Staten Island that of seven houses remaining at Oude Dorp only three were inhabited; the scanty population had spread westward. The political center probably moved westerly with the population to a more central location, near New Dorp, known as Stony Brook. Dr. James Sullivan, state

¹ Read at a meeting of the Section of Historical Research January 12, 1918.

historian, has pointed out that changes of place names by the English were quite common at the time when Dover first appears in the records.

Thus by Mr. Tuttle's efforts Dover is shown to have been the name given by the English officials to the earliest political center of Staten Island, identical with Old Town; later (1680?-1729) Stony Brook appears to have been the political center, and numerous maps of that later period locate Dover there. Finally the name Dover was entirely abandoned in favor of the names used by the settlers.

A map of "The Town of Dover upon Staten Island" showing ownership of land 1664-1695, which accompanied the original paper, is reproduced opposite this page.



Supplement to the Report of the Committee Appointed to Investigate and Report upon the Accuracy of All Dates and Events Entered upon the Historical Tablet in the Borough Hall¹

GEORGE W. TUTTLE

Since the above-mentioned report was presented, much additional evidence has been found concerning the eighth and ninth events inscribed upon the historical tablet in the Borough Hall: "1683, Court House erected at Stony Brook (County Seat)"; and "1729, County Seat changed to Richmond and second court house built."

It is believed that this evidence should be brought to the attention of the Institute and put on record; consequently it is presented herewith.

After the English conquest in 1664 Staten Island was included in the West Riding of Yorkshire, a district laid out by Governor Nicolls soon after the conquest, to correspond with similar districts in England. The Court of Sessions for this district was held in Gravesend, Long Island; and Staten Island together with the other communities in the riding were taxed in 1668 for the building of a sessions house at Gravesend. (See PROC. STATEN IS. ASSOC. 6: 52, 53, for Oct. 1915.)

The General Court of Assizes on the 13th of Oct. 1675 ordered, "That by reason of the seperacon by water Staten Island shall have jurisdiction of its selfe, and to have noe further dependence on the Courts of Long Island nor on their Militia."²

This independence does not appear to have been complete, however, for from 1677 to 1683 the Constable of Staten Island was

¹ Read at a meeting of the Section of Historical Research April 19, 1920. See PROC. STATEN IS. ASSOC. v. 6, pt. 1, Oct. 1915.

² Minutes of the Common Council of the City of New York 1 (1675-6): 4. N. Y. 1905.

regularly, and a justice from Staten Island was often, a member of the court. A due proportion of Staten Island cases were tried during this time although the court more than once during this period stated that "the said place (Staten Island) was alienated from the jurisdiction of the co^{rt}."

"Att a Co^{rt} of Sessions held at Gravesend in the west Ryding of Yorkshire upon Long Island . . . etc Dec 20th 1682" it was "Ordered that the Constable and Overseers of Staten Island, doe make a Rate for the building of a strong and sufficient Prison in some convenient place upon the said Island & also a Town House." As Staten Island matters were adjudicated at the Court of Sessions in Gravesend as late as June 1683 with the Constable of Staten Island present, the last session on record in that year, it is practically certain that sessions cases were tried at that town until the County of Richmond was established and a court of sessions in the county provided for on Nov. 1, 1683.³

The records of deeds in the County of Richmond begin in 1683, when the county was established, and the first volume contains the minutes of a Court of Sessions held for the County of Richmond March 6, 1687 (p. 194). We also find the minutes of "a Court of Sessions held for the County of Richmond *at the Court House of the Said County*" on Dec. 4, 1688, before Thomas Lovelace, Richard Stillwell, and Jacob Garrettson, Esqrs., Justices of the Peace (p. 643), as well as a record of an "Inferiour Courte of Pleas" held on the same day at the "Court House of the said County," Thomas Lovelace being judge, and Richard Stillwell and Jacob Garrettson, Esqrs., justices of the peace within the county.⁴

It was stated in the PROCEEDINGS OF THE STATEN ISLAND ASSOCIATION above mentioned (p. 12) that the whereabouts of a book referred to by Clute, which contains the records of a "Court of Sessions held in the Court House at Stony Brook," was not known, and hope was expressed that the records might be found

³ Court and Road Records Kings County, v. 2, 1688-1766. PROC. STATEN IS. ASSOC. 6: 54.

⁴ Deeds B, p. 639, Richmond County.

that alone would dissipate doubts as to the accuracy of the quotation.

Fortunately E. C. Delavan, Esq., has rediscovered the records in the office of the clerk of the County of Richmond. They are contained in a book entitled "Records of the Court of Sessions and Common Pleas 1710-1745."

The first court of which the proceedings are entered in the book was held March 6, 1711, but it was not until March 5, 1718, that it mentions the court of "common pleas held at Stony Brook." It contains the minutes of the "Court of Sessions held at the Court House" March 6, 1721, but it was not before the date March 5, 1723, that a record of a "Court of Sessions Held at Stony Brook at the Court House" appears. The reference given by Clute was therefore correct.

The records thus show that the County of Richmond had a courthouse in the year 1688, that a court of common pleas was held at Stony Brook in 1718 and that in 1723 its courthouse was at Stony Brook. It is probable therefore that the "Prison and Town House" for which the Court of Sessions at Gravesend ordered taxes to be levied in 1682, was erected soon after at Stony Brook, where it is believed Courts of Session and Common Pleas were held until their removal to "Richmond Towne" in 1729.

The eighth date and event "1683, Court House erected at (Stony Brook)" is therefore probably correct, but is not proved to a certainty. This inscription does not take account, it should be said, of the more important facts that at this time Richmond County was established and courts of justice provided.

The courthouse at Stony Brook now appears to be the first one erected at public expense of which we have a record, and that built in 1728-1729 at Richmond the second one.

The last date when a court is mentioned in the rediscovered record as being held at Stony Brook, and the earliest dates when courts are mentioned as being held at Richmond, are found in this book as quoted from the local histories on page 14 of the PRO-

CEEDINGS above mentioned. These quotations are therefore now verified by the original records.⁵

A French map of the Guyon property including Great Kills and vicinity, found among papers dated 1676, shows two villages, one of which is New Dorp and the other is apparently Stony Brook.⁶

In a paper on "The town of Dover upon Staten Island" read before the Section of Historical Research of the Association at its annual meeting in 1918, the writer gives his reasons for believing that Old Town, the political center in 1664 and for some years afterward, and where courts were held during this time, gave place to Stony Brook as the political center (probably not earlier than 1676), as the consequence of the coming of many new settlers, who took up lands to the south and west of the ancient village.

Number 17, p. 27, of the Historical Tablet Report (Proc. STATEN IS. ASSOC. v. 6) should be dated Sep. 16, 1652, instead of July 7, 1645, as printed.

It is due to E. C. Delavan, Esq., to say that he first called in question the accuracy of a number of the dates and events entered upon the historical tablet in the Borough Hall and was instrumental in bringing about the investigation and report to the Association which followed.

⁵ Records of the Court of Sessions and Common Pleas 1710-1743, at Richmond County Court House, New Brighton.

⁶ Land Papers 1: 99. A copy of the map is in the possession of the Institute.

Reminiscences of David M. Van Name ¹

CHARLES W. LENG

In the *Staten Islander* of Feb. 11, 1920, is printed an obituary of the late David Mersereau Van Name (born Jan. 1, 1840; died Feb. 4, 1920) in which reference is made to his memories of the old North Shore of his boyhood. These are contained in a manuscript in his handwriting, prepared by him for his family in 1916, and loaned by them to me, and the following are abstracts therefrom:

"While [I was] living on the Harbor Road an election took place in 1844 and James K. Polk was elected president of the United States. There was a public parade on the North Shore and a barbecue held after by roasting an ox. This barbecue was held on the property of Captain Nicholas Bush a few feet east of the Harbor Road. During the parade I recollect distinctly walking beside it not quite five years old. The oxen had their horns trimmed with an American flag on each. The flag pole had been erected for the occasion by the Democrats of the Island and a tall and straight hickory had been selected about 60 feet high with the top branches left on and they were decorated with small American flags over the entire top. It looked beautiful to behold. This tree stood at the foot of the Harbor Road on the north side. The Emblem stood for the Democrats and the ash tree stood for the Whigs."

"The dock at the foot of John Street was used in connection with the quarry at the head. . . . Large quantities of stone were used to build the Delaware Breakwater along the coast for protection of vessels as a harbor. Many streets of Charleston, S. C., were paved with blocks taken from this quarry, also the large square stone for paving Whitehall St., Broadway, and above Bowling Green, N. Y. City. The broken stone was sold to the

¹ Read at a meeting of the Nature Study Club Feb. 9, 1920.

city of Brooklyn for macadamizing streets. These stones were broken by hand and placed in piles and sold by the cubic yard, as machinery for this purpose was unknown. Tens of thousands of tons were sold for foundation, dock, and sea-wall purposes, and vast quantities of the debris were sold for ballasting vessels running south, known as coasters."

"The North Shore brick yards made millions of them for the market as the clay deposits are considered excellent and the vast depressions which are still in existence are evidence of the enormous business that has been carried forward in former years of industry. From the different yards specialized brick have been made. The Merrit yard produced the mud brick. The Lowville yard, mud and pressed and bricks of enormous size, 8 x 12, used in paving some of the streets in Texas. The upper brick works, known as the Red Lake depression, were makers of millions upon millions . . . such as mud, dry pressed, enameled face, Philadelphia fronts."

"The horse boat ferry ran between Port Richmond and Bergen Point. The horse was placed on a movable platform and his keeper with his whip in hand, behind him to spur quicker action, as circumstances would demand through wind and tide."

"A plot of ground in front of the [Continental] hotel extended to the middle of the present street with the old willow trees standing on the bank, and the old town pump across the roadway, which pump I used in 1866 for water for horse and wagon washing."

"During the Revolutionary War . . . my great uncle offered to take his life in hand to act as a spy. Gen^l LaFayette presented him with a cork suit to swim the waters between the two states to bear messages of prime importance gathered from the English army to the headquarters."

"[My ancestor] John Mersereau drove the post coach from New York to Philadelphia, and at the outbreak of the war, turned his horses over to the American Army. After the war he removed . . . to the banks of the Susquehanna River and founded

the village of Union, N. Y. . . . [He] was instrumental in saving the retreat of Gen^l Washington's army after crossing the Delaware River by discovering a boat and destroying it."

. "Moses Van Name was my grandfather and in his early life followed the sea, and during the Revolutionary War was called upon by an English officer to obey the order of Sir Lord William Howe. During his encampment on Staten Island, the people had become so terrorized by the treatment of the English soldiers, they were willing to consent to most any request, not by love, but by fear. Winter approaching, soldiers in camp, they needed fuel. An English officer was commissioned to call on the farmers or captains, who owned wooded tracts, each to cut so many cords of wood and deliver it to be placed on my grandfather's vessel to be delivered at Quarantine. They dare not refuse, expecting no returns for their wood and labor. After the delivery was complete, one of the officers asked him if he would like to have some money? Imagine the surprise by such an interrogatory, he was delighted to answer in the affirmative. So the commissioner gave him an order to go to the city of New York, at a certain building of business conducted by and for the English Government at the present Bowling Green. So one fine day he set sail for the city; with his order he entered, was ushered in the Banker's office. Such a sight as never to be forgotten by him. Gold piled on a table uniformly in rows, representing stipulated amounts in each pile. The banker in charge took a large knife and placed it between rows and put it outside, which constituted the value of the order. The officer commanded him to put it in his hat, and count it when he got at home, and divide it among his neighbors in proportion to the wood furnished by each, and take his out and for services in delivering it. Rejoicing fell on the lips of all."

"The oyster business was the life of the town. . . . The occupants of property on the North Shore and the side avenues were mostly engaged in this line. A very interesting sight could be seen on a Sabbath morning in the waters of the bay and Kills, when the

week's business had ended, of the beautiful crafts at anchor, kept in a state of fine perfection. The owners vied with each other to outdo their neighbors, these were the oyster carriers that brought their stock from Princess Bay to the North Shore to be culled, and separated, placed in the floats to give them drink before marketing. Fifty years ago our highways were built in this section by refuse shells in marketing oysters. Our roads were a pride to all people, who were fortunate enough to have horses, and enjoy the splendid highways. We needed no moon or electric lights to guard our ways. White as snow in the darkest of hours, these crushed shell roads were enjoyable as no noise emanated from them. The gentry came from the other side of the island, particularly from New Brighton, to enjoy these fine drives upon our shell roads in summer evenings, and the views of the waters of the Bay and the fine fleet of oyster crafts, alas a thing of the past."

Doctor John Quincy Adams, a Brief Tribute from a Close Friend ¹

JACOB E. CONNER

Some men seem to be born with a genius for friendship. Their companionship is like the companionship of a good book, which grips you and holds you till it has blessed you with its message, and then it will not depart from you.

There are those whose company you enjoy because they antagonize you. You look for an encounter with them as for an intellectual combat, sharpening your wits, making you careful of your statements and ready with your tongue. They do you good if you do not let them spoil your spirit.

Then there are others, much rarer in quality and harder to find, with whom you are in such harmonious concord on most subjects that controversy would be out of place on any subject. Such was Doctor John Quincy Adams; and many's the time I have climbed the steep hill to his home, confident of more than a feast of good things in the friendly interchange of views, and was never disappointed. To converse with Doctor Adams was like taking a leisurely stroll in a natural orchard, helping ourselves to whatever fruits pleased us, each according to his personal taste, but always walking together companionably. Controversy was quite out of the question, even on fundamental issues, because points of difference were set aside as soon as recognized, to be settled by each one for himself, alone. Doctor Adams never talked as some people do, to convince the other fellow that he was wrong; for his own mind

¹ Read at the funeral services of Doctor Adams, February 15, 1919. Doctor Adams was born in Jefferson county, New York, graduated from Northwestern University in 1889, received degree of Doctor of Philosophy at Halle in 1892, was Secretary of Association of Colleges and Preparatory Schools for seven years, Secretary to Municipal Art Commission from October 10, 1907, until his death on February 12, 1919. He became a member of the Institute March 5, 1909, Honorary Curator of Arts and Antiquities the same year, and a member of the Board of Trustees in 1910. As a member of the Board of Trustees, Doctor Adams was chairman of the Finance Committee and energetic in obtaining subscriptions to the new building.

was too open and frank and generous and courteous, to permit him to assume a superior attitude in friendly conversation. His convictions were deep and strong and he defended them with vigor, but in friendly conversation his delicacy restrained him from descending into controversy and gave him his unusual personal charm.

It is no wonder that this personal charm should have won him such an unusual list of friends among the talented men of his time. Not to name them all, we may mention John Singer Sargent, Edwin A. Abbey, James McNeill Whistler, and Mark Twain. Many an incident he has narrated of informal call and congenial conversation with these men, especially Whistler and Mark Twain, and he dearly loved to dwell upon his memories of them. He was under no illusions about his own gifts, unless it were a modest underestimate of his own personal charm and conversation.

Doctor Adams held lofty ideals, but was no visionary. He was rather a realist who was gifted with unusual vision. In this respect he was admirably qualified for prosecuting his great purpose, which was to popularize the beautiful in every way possible. "Good taste and good judgment must ever join," he thought, hence to popularize good taste was to inform and stabilize the judgment and was more laudable as an end than to please the eye. Therefore he was a connoisseur in painting, sculpture, and architecture, not so much because his position required it of him as that his heart and soul and judgment demanded it.

And was it not a beautiful life to live, with such a purpose in view, such an object to work for? A life like that is in harmony not only with the dictates of esthetics but with philanthropy, with patriotism, with a preparation for the life beyond. It is the life of a true philosopher. And somewhere in that Great Beyond, where all that is mortal is laid aside, where the spirit is at liberty to pursue its untrammelled course, where "the Good, the True and the Beautiful are clearly perceived to be the attributes of God," the spirit of our friend has for a short time preceded us. We shall meet again.

The Cold Winter of 1917-18 and Its Effect upon Vegetation on Staten Island, N. Y.¹

WILLIAM T. DAVIS

The extremes in temperature during the year 1918 will go down into history as most remarkable. On December 30, 1917, the mercury dropped to the low record of thirteen degrees below zero at 8.30 a.m. in New York City, and from that time on during the winter there were a number of cold periods often of considerable duration. The *New York Tribune* of Feb. 6, 1918, recorded 10 degrees below zero at some of the terminal points in New Jersey, and 37 below in northern New York.

The other extreme was on August 7, 1918, when the mercury reached 102° F. at 4 p.m. in New York City, passing the previous high temperature of September 7, 1881, when it stood at 100° F.

That the continued cold of the winter should have an effect on the vegetation was to be expected, and it was recorded at a meeting of this Association held May 18, 1918, that a recent examination of the high-water shrub, *Iva frutescens*, growing on the banks of some of the salt-water creeks of Staten Island, showed that the bushes had died far down toward the ground. Some of the more vigorous shoots had sprouted about 8 or 9 inches from the roots, while others had been more completely winter killed. The amount of vitality shown by this native bush in the spring is always in this latitude an index to the severity or mildness of the winter just passed.

As was to be expected the imported plants suffered most from the severe conditions, and hedges of privet that had grown luxuriantly for many years were killed down to the ground. The fine hedge about the Staten Island Academy, corner of Wall Street and Stuyvesant Place, St. George, was a good example. It had stood for twenty winters, but without exception the bushes were

¹ Read at the regular meeting of the Institute October 19, 1918.

killed down to the roots. Hedges of Manchurian privet did better than those of any other species, and in some parts of the island, especially where more or less protected, the bushes were not damaged to any great extent.

Still more sensitive than the privet was the evergreen Japanese *Euonymus*, and four bushes that had flourished in the writer's garden at St. George for a number of years were killed down to the ground by the severe cold of the winter.

The oriental sycamore suffered to some extent, and in a row of eleven trees on Hamilton Av., New Brighton, several were killed or much injured by the winter. Other trees of this species were killed on Bay St., Clifton, close to where it is crossed by the tracks of the Staten Island Rapid Transit Railroad. Catalpas were likewise injured, and one was killed at 136 Stuyvesant Place, St. George.

A walk in Central Park, Manhattan, in June, disclosed the fact that many trees had been winter killed, particularly catalpas. A number of elms along the mall, or near it, had died, and one of these was being felled at the time of our visit. A park gardener stated that he had never known so many trees to die in any previous winter. Many Lombardy poplars along Riverside Drive, Manhattan, were also killed.

Nearly all of the medium-sized or large paper mulberry trees on the northern end of Staten Island were either killed or seriously damaged. Several large ones were killed on the grounds of the one-time Planters' Hotel, corner of Bay and Grant streets; one nearly killed in the yard back of the Baltimore Flats, Tompkinsville, and many killed and others badly damaged along Franklin Av., New Brighton. Several paper mulberries were also damaged in the garden of Mr. Charles W. Leng, 439 Clove Road, West New Brighton.

Some pear and peach trees were killed, but in the small gardens on Staten Island the greatest economic loss seems to have been among the sweet cherry trees, and it is well within the limits to

say that two-thirds of these trees growing on the easterly half of the island were winter killed. Most of these trees are still standing and may be seen by any observer walking along our streets. A list of a few of these dead or dying trees, made for record, is as follows:

Large tree, planted about 1870, 154 Stuyvesant Place, house and grounds occupied by Staten Island Association of Arts and Sciences until June 1, 1918.

Two large trees in grounds of the Light House Department, St. George.

Medium-sized tree, 100 Stuyvesant Pl., St. George.

Medium-sized tree, cor. St. Marks Place and Hyatt St., St. George.

Medium-sized tree, 24 Central Av., Tompkinsville.

Medium-sized tree, 344 St. Marks Pl., Tompkinsville.

Three medium-sized trees, 378 Bay St., Stapleton.

Large tree, Clinton St., near Bay St., Stapleton.

Medium-sized tree, 478 Bay St., Stapleton.

Small tree, 390 Van Duzer St., Stapleton.

One large tree damaged and two others dead, 396 Van Duzer St., Stapleton.

Large tree, cor. Van Duzer and Wright St., Stapleton.

Large tree, 90 Boyd St., Stapleton.

Medium-sized tree, cor. Boyd and Wright St., Stapleton.

Small tree, 6 Hendricks Av., Fort Hill.

Large tree, 146 Benziger Av., Fort Hill.

Large tree, 16 Scribner Av., Fort Hill.

Large tree, 21 Scribner Av., Fort Hill.

Tree dying, 404 Westervelt Av., Fort Hill.

Two dead trees, 410 Westervelt Av., Fort Hill.

One dead tree, 414 Westervelt Av., Fort Hill.

Medium-sized tree, 75 St. Marks Pl., New Brighton.

Large tree, cor. Westervelt Av. and Richmond Terrace, New Brighton.

Four large trees in Jackson Park, Franklin Av., New Brighton.

One tree, 194 Clove Road, West New Brighton.

Six trees in lot, cor. De Groot Place and Clove Road, West New Brighton.

Two on De Groot Pl., West New Brighton.

Two at 380 Clove Road, West New Brighton.

One at 397 Clove Road, West New Brighton.

Large tree, 439 Clove Road, West New Brighton.

Two, cor. Forest Av. and Clove Road, West New Brighton.

A walk near the western end of Staten Island during the summer showed that while many cherry trees had died from the cold of winter the mortality among them had not been so great as on the easterly end of the island.

It would be of great interest to know just why so many cherry trees died on the island, while the peach trees of the home gardens did not suffer in like proportion, and the pear trees still less. For the sweet cherry as with every other species there is probably a definite point, and when the temperature falls below this the life of the tree is in danger.

This list of winter-killed trees might be considerably extended, but enough has been given to show that the damage to vegetation has been considerable, greater than in any previous winter that we remember or of which we have any record.

In the *Extension Service News* and *Farm Bureau News*, published by the Extension Department of the New York State College of Agriculture, for August 1918, Prof. W. H. Chandler has an article on the damage done to fruit trees during the winter of 1917-18. He says: "The amount of injury to fruit trees by the past winter is very great, though of the five fruit counties along Lake Ontario only Wayne and Oswego have suffered seriously." "Many sweet cherry trees have been killed . . ., but by far the greatest loss has been with apple trees, since more of these are planted in the colder sections."

In the way of retrospect we find in the annals of Staten Island references to the following severe winters. In 1650 the Kills and Sound were frozen over and people suffered for every necessity of life except fuel. In the winter of 1740-41 "snow fell to the depth of 6 ft. on the level." The winter's "extraordinary severity continued from the middle of November to the end of March." In 1761 during January "the weather became exceedingly cold and continued so till March, the Narrows were frozen over." By far the severest winter of which we have any record is that of 1779-80. The snow was banked in vast drifts against houses and barns, and New York Bay was completely frozen over, so that detachments of cavalry and cannon were conveyed from the city to Staten Island on the ice. The American troops, it is stated, stood in "snow waist deep" on the 15th of January in the vicinity of the earthworks erected by the British on what is now known as Fort Hill. It is recorded also that a resident of Staten Island entered his sleigh at his own door and "did not leave it until he reached his relatives' door at New Lots in Kings County," Long Island. From these circumstances and the long-continued cold, this was generally known as the "hard winter of 1779-80."

Previous to the winter of 1917-18, the lowest temperature recorded by the local weather bureau was six degrees below zero on January 10, 1875; December 31, 1880; February 17, 1896; February 11, 1899. Reliable private thermometers in many suburban localities registered lower temperatures in the winters referred to. There is a record of 10 degrees below zero in New York City in January 1866, mentioned by George N. Lawrence, *Ann. Lyc. Nat. Hist. N. Y.* 8: 287.

There have been many great storms when the temperature was not as low as stated above, but which for other reasons, such as excessive snowfall or high wind, were remarkable. Such was the "Great Blizzard" of March 12 and 13, 1888. Next came the "Great Frost of 1895," when on February 8 a low temperature accompanied by high wind extended to the Gulf of Mexico. The *New York Sun* of February 9 stated that "The only patch of

country above the freezing point was the extreme tip of the Florida peninsula, Key West reporting the only temperature above the freezing point east of the Rocky Mountains."

On February 12, 1899, I recorded: "Today there is a brisk snowstorm and it is cold. On the 10th the thermometers in various parts of our island registered from 7 to 10 degrees below zero and Staten Island Sound is reported frozen over." On February 13, 1899, a storm that for severity rivaled the blizzard of March 1888 reached Staten Island. It was said that not a vessel entered the bay, and the harbor was choked with ice. This storm was called the "Blizzard's Closest Rival," for while the snowfall was not quite as heavy, the wind was higher and reached a maximum velocity of 58 miles an hour.

The winter of 1903-04 was recorded by the local weather bureau at the time as the "Coldest Winter on Record," with a mean temperature of 26 degrees, and that of 1904-05 as the next coldest, with a mean temperature of 26.8° F. In both of these winters some of the less hardy introduced plants on Staten Island were either killed or badly injured, but the damage done was not nearly as great as in the remarkable winter of 1917-18.



Two Hybrid Oaks near Richmond Valley, Staten Island, N. Y. First figure shows young shoot at base of tree with characteristic leaves

A Second Station for Hybrid Oaks on the Western End of Staten Island¹

WILLIAM T. DAVIS

(WITH PLATE 3)

On July 8, 1918, the writer was examining the white pines growing at the "Old Camp" to the north of the railroad station at Richmond Valley for boring insects and the colonies of carpenter ants that so frequently tunnel the trunks of these softwood trees. On leaving the grove our path led along the little brook that flows southerly through the woods until it crosses the railroad track and then westerly by the side of the track to the salt meadow and Weir's creek. On our approach to the railroad track, and only a few hundred feet away from it, a hybrid oak was discovered near a path on top of the high bank of the brook. This tree has a forked trunk and rather narrow leaves, some of which show an occasional tooth on the side. The trunk measures 3 ft. 9 in. in circumference about 3 ft. from the ground, where it commences to divide. The other tree is on the opposite side of the brook, on the edge of the woods, by an overgrown field, and is also on rather high ground. Its leaves are much broader, and the trunk measures 3 ft. 10 in. in circumference about 3 ft. from the ground.

The accompanying photographs will show the trees, and it will be noted that a foot rule was taken with the trunk pictures to accurately show the size by comparison. (PL. 3.)

No other trees were found, but it is not improbable that others do really exist in the neighboring woods.

The two trees here recorded are referable to *Quercus heterophylla* Michx., the Bartram oak, one of the two hybrid oaks found on Staten Island in 1888, in the moist land to the west of Beach Av., and recorded in the PROCEEDINGS OF THE NATURAL SCIENCE ASSOCIATION OF STATEN ISLAND for September of that year. This locality is about a mile to the southwest of the one near Richmond Valley railroad station, and it may be pointed out that the conditions under which the trees have grown are somewhat different, the one being much more dry than the other.

¹ Read at the regular meeting of the Institute October 19, 1918.

A Staten Island Whale¹

WILLIAM T. DAVIS

In the *Richmond County Advance* of March 2, 1920, is the following item: "A female porpoise, measuring nine and a half feet long and weighing 800 pounds, was captured this morning by several men off South Beach. The large denizen of the deep was evidently struck by the propeller of a ship, landed against a rock or participated in a fight under water, as it lost fifty-six quarts of blood after being hauled ashore."

"In the party who took the porpoise were John J. Shannon, of Bungalowtown; Clifford Townsend, of Camp Warren; Salvatore Balessie and William Maccopelas, of Ocean Bay. They hauled their prize to terra firma with the aid of a stout line after wading in the water, which was at low tide, for some distance off shore."

"The fish will be sent to Fulton Market, where it will be sold to merchants, who have arranged to buy it for the purpose of extracting the oil in its body and using its skin for other purposes."

The animal here described was not a porpoise, but a Pigmy Sperm Whale, *Kogia breviceps* (Blainville), an inhabitant of warm seas and occasional on our coast. It was on exhibition, March 4, at the store of L. and F. Nagele, 408 Columbus Avenue, Manhattan, and was said to weigh 850 pounds. It was measured and found to be 9 feet long. On the following day the whale was purchased by the American Museum of Natural History, and at the second annual meeting of the American Society of Mammalogists, held May 4, 1920, Messrs. C. L. Camp and James P. Chapin presented a paper on "A Dissection of a Pigmy Sperm Whale (*Kogia*)."

The specimen was a female, and a cast has been made of it for the American Museum.

¹ Read at a meeting of the Nature Study Club March 8, 1920.



DAVIS : Menhaden or mossbunkers dead on the beach at Ward Point, Totten-
ville, Staten Island, N. Y., June 3, 1921.

Dead Menhaden on the Shore of Staten Island ¹

WILLIAM T. DAVIS

(WITH PLATE 4)

On the 12th day of October 1679² Jasper Dankers and Peter Sluyter visited the south shore of Staten Island and they record: "Lying rotting on the shore were thousands of fish called marshbaucken, which are about the size of a common carp. These fish swim close together in large schools, and are pursued by other fish so that they are forced upon the shore in order to avoid the mouths of their enemies, and when the water falls they are left to die, food for the eagles and other birds of prey."

It had been supposed that menhaden or mossbunkers would not again be found washed onto the shores of Staten Island in the vast numbers described by Dankers and Sluyter. This opinion, however, does not appear to have been well founded, for on June 3, 1920, the writer saw, upon reaching Tottenville, men collecting dead and decaying fish near the ferry landing, and on the shore near the Billopp House hundreds of dead menhaden were found. Along the shore at Ward Point and for a mile in the direction of Richmond Valley the dead fish were in great numbers. Later it was learned that they were by the hundreds on the beach at Princes Bay, near Lemon Creek and the lighthouse. The fish were so numerous that the beach in places appeared white with them when seen at a short distance, and upon a nearer approach their bodies were seen to touch and oftentimes to lie in piles. Never before had the writer seen so many dead fish together on any beach visited. These menhaden were mostly of full size, that is about ten or twelve inches in length. (PL. 4.)

Mr. Melville Decker told me that some years ago a great many menhaden had come ashore, but not as many as on this occasion.

¹ Read at a meeting of the Nature Study Club September 22, 1920.

² Clute's, Bayles', and Morris' histories of Staten Island are in error in giving the date of the visit of Dankers and Sluyter as 1676; it should be 1679.

He has lived near Ward Point for many years, but only at the times mentioned had he seen the beach so covered with dead mossbunkers.

On August 13 many schools of living menhaden were seen in the waters between Staten Island and Keyport, N. J., but by that time the remains of the thousands of dead ones on the shore had largely disappeared, with the exception of their bones.

In the *Bulletin of the New York Zoological Society* for November 1920, there is an article on Pound Fisheries of Lower New York Bay, and the statement is made that "During 1919 and 1920 there has been a tremendous run of menhaden, while for several years previous almost none were taken in the Bay."

Note.—In the latter part of May and first part of June 1921, dead mossbunkers were again very numerous on the shore at Ward Point, though perhaps they were not quite as plentiful as in 1920.

Notes on Staten Island Blacksnakes¹

WM. T. DAVIS

On October 23, 1920, the writer came upon a blacksnake, *Coluber constrictor*, 4 ft. 7 in. in length, that had been killed in Silver Lake Park on one of the two previous warm days, when the thermometer reached 80° F. in the shade.

Blacksnakes are becoming rare on Staten Island, as is to be expected if we consider the increasing population, and it is remarkable that the specimen in question should have so long eluded its enemies, chiefly human, who inhumanly kill nearly every wild creature on sight. There are no rocky shelters on the island, such as occur along the banks of the Hudson Highlands, where many wild animals find a safe retreat. Even in Illinois the blacksnake is becoming rare and Prof. H. Garman in his Synopsis of the Reptiles and Amphibians of that state, published in 1892, says: "Formerly a common species, but it has been exterminated in the better agricultural regions, and is not common at present except in localities where there are extended tracts of uncultivated land to afford it retreats." In his list of the Snakes of Monroe and Orleans County, N. Y., *Copeia*, March 1919, Prof. A. H. Wright says of the blacksnake: "This species is becoming rare where it was once common."

A blacksnake, of the species under consideration, 6 ft. in length, may be considered a large specimen. In *Copeia* for July 1918, p. 76, one measuring 6 ft. 5 in., collected at Garrison-on-Hudson, N. Y., by Mr. Owen Cattell, is recorded. In PROC. NAT. SCI. ASSOC. STATEN IS. 5: 92, 13 Je 1896, there is the record of the "cast-off skins of three blacksnakes, measuring respectively 5 ft. 8 in., 5 ft. 4½ in., and 5 ft. ½ in. in length. They were found by Mr. H. W. Putnam, May 31, near the foot of Red Lane, Southfield, and were intertwined when discovered, which may have re-

¹ Read at the meeting of the Nature Study Club October 1920.

sulted from the snakes all going to the same place, though at different times, to shed their skins."

On May 16, 1885, the writer was in the vicinity of Uncle Ed. Wood's brook, Tottenville, and hearing a rustling among the dead leaves on the ground, supposed that a snake was close by. Soon two blacksnakes were observed, one of which almost immediately made off, going down to the brook side where the underbrush was thicker. The remaining snake was watched for some time in expectation that it would act, but it remained quiet. Finally it was poked gently with a stick, when it vibrated its tail, causing a menacing sound among the dead leaves. It was made to repeat this about a half dozen times and would vibrate its tail among the leaves every time I stamped on the ground. The snake was followed slowly about as it went from clump to clump in the bushes, and in order to escape it climbed upon the catbriers and very gracefully made off, going from bush to bush with great rapidity, and in the same direction as did the first snake when it was disturbed. After a considerable time it was at last observed to climb a catbrier that was tangled about a small elm tree. It went from branch to branch until it was about half way up the little tree, where it remained, and I was surprised to see another snake, no doubt the one that had at first made off, in the top branches of this same elm. The writer then sat down to observe what would happen but the reptiles seemed much inclined to remain as they were. Birds were very numerous, and soon two catbirds came to the adjoining tree, but they did not observe the snakes, nor did numerous other birds that came to the neighboring trees. At last two more catbirds, or they may have been the same two, came to an adjoining tree, and in the middle of his song the male stopped short and called his cry of alarm; he had discovered the snakes. The birds then flew many times very close to the snake lowest down on the tree, often not being a foot away. In a short time a brown thrasher, probably attracted by the cries of the catbirds, flew to the tree, and with feathers ruffled showed he was angry. He hopped about for a few

seconds, and then flew at the snake lowest down, striking him about in the middle of his body. This he repeated twice, and then the snake fell from the limb. The bird then flew to the top of the tree and attacked the other reptile, which let go its hold after the first peck. The catbirds all of this time were looking on, and one of them made a good deal of noise.

Again at Tottenville, on May 24, 1885, three pairs of blacksnakes were found; also two lone individuals. Some of the eight individuals would vibrate their tails in the dead leaves, also one of them followed me for about two feet. Both of the lone snakes would bite savagely at my umbrella, and one of them left a tooth sticking in its cover, for they would or could not let go, when lifted off of the ground, after they had bitten the umbrella.

On April 18, 1886, near the central part of the island I came to a blacksnake coiled in the sun. It did not try to escape but remained motionless, as they often do, and would have let me pass by. It was poked gently with a small stick, when it showed fight and then **made off**.

On October 10, 1886, about noon, I met a blacksnake near Richmond Valley, and after trying in vain to get it to either run away or follow me when I ran, I sat down near to it and commenced to eat lunch. The snake was about a yard away and kept nearly the same position for half an hour, sticking out its black tongue every few seconds. After a while it moved off, going very slowly, nor would it go any faster when I pursued, but would turn about and offer battle in a mild form. When it moved undisturbed among the bushes and grass, it continually used its tongue as if to test everything that lay in its way. It had lost most of its tail, the remaining stump being very blunt.

A much more lively blacksnake was observed sunning itself on October 24, 1886. It was a young one and made haste to escape.

On June 5, 1887, I went to Watchogue with Dr. Arthur Hollick to show him some plants of *Clematis ochroleuca* recently discovered on the Big Hummock, and at noon we sat on a low stack of

salt hay to eat lunch. My companion had settled down to an easy position, when he exclaimed, and looking up I saw quite a large blacksnake going across the open and into the huckleberry bushes beyond. The snake had been in the hay and had been sat on, so it decided to seek a safer place where no man could sit on him.

The latest seasonal date that I ever found a blacksnake on the island was on Thanksgiving Day, November 24, 1887, when one was found dead near the highest point. It was about 5 ft. in length. The next latest date was on November 22, 1890, when one about 5 ft. in length, that had been shot, was found near the central part of the island.

On July 12, 1891, in the woods between Richmond and the present Oakwood, a blacksnake came from the hillside toward me, but it was rushing through the bushes and small trees to the thicker growth of a swamp and was willing to come thus near to finally attain a place of greater safety, which it accomplished.

It has seemed to the writer that blacksnakes sometimes get killed because they do not practice the proverbial wisdom of serpents but stay near their enemies when they should seek safety in flight. On April 16, 1897, near Richmond, two such snakes were found sunning themselves. They vibrated their tails rapidly when approached, and one of them, that was near a small pond, was very reluctant about entering the water to escape, and as it was, he only wet himself a little bit, simply skirted the pond.

On May 30, 1897, on Ketchum's hill back of Richmond, we surprised a blacksnake in a small clump of bushes. The snake was afraid to leave the bushes and cross the open ground. When pursued he would climb several feet from the ground, probably to escape notice. Once I tossed him out on the open grass, but he quickly returned. When caught by the neck and carried to the open ground and started down the hill, he made the usual blacksnake speed.

That a blacksnake cannot readily detect danger, though he touches almost everything he comes to with his tongue, is evinced

from the following: on August 12, 1899, I sat by a stack of salt hay on the edge of Old Place meadow, when a large, glossy blacksnake came slowly toward me and rested his head on my foot. There he stayed for a time, or until I moved slightly, perhaps it was only my eyes, when he made off into the bushes.

The earliest seasonal date for the finding of a blacksnake on the island by the writer was March 15, 1903, when a large dull-colored individual was discovered near Richmond. It was sluggish, but after being tickled with a straw decided to seek safety in the bushes.

On October 15, 1904, a dead blacksnake was found in Reed's valley. It was being devoured by burying beetles.

Four blacksnakes were observed sunning themselves at Great Kill, on April 18, 1909, one of which was captured. This last was placed in the lane and its photograph taken. During these proceedings it was quiet, but when James P. Chapin picked it up to place it in a pile of stones, so that it would be safe, the snake tried to bite him.

On May 16, 1909, we found a blacksnake near Great Kill that fought us when disturbed, and once seized me by the trousers leg, its little teeth sticking into the cloth. What it really wished to do was to get under a nearby log, which we permitted after taking its photograph. I have several times found blacksnakes under the bark of dead trees, and once at Tuckerton, New Jersey, Mr. Howard H. Cleaves and I found one under a log. It was difficult to keep it away from its home, for though at first it made off it came back directly and went under the log, though we stood close by.

The late John A. Grossbeck, entomologist in charge of the Lepidoptera in the American Museum of Natural History, resided in the Clove Valley in 1913, and on the morning of June 29 of that year, he heard a family of brown thrashers, which had a nest near his home, making a considerable noise, and upon investigation he disturbed a blacksnake, which dropped from the small tree standing among the bushes, with one of the young thrashers in its

mouth. He captured the snake, kept it alive for a time, and later gave it to me. On Gardiners Island a fisherman told me in 1909, that during the previous summer he had tried to raise some chickens but that a considerable number were eaten by a blacksnake which he at last was able to surprise and kill. One of the most interesting tree-climbing activities of a blacksnake that has come under the writer's notice was at Long Pond, near Culvers Gap, New Jersey. The snake saw me coming along the shore of the pond and instead of climbing over the bushes on which he was lying, and thus making his escape, he climbed up a tree, coiling about one of its topmost branches. I threw stones and struck the tree violently, but he would not come down.

The last blacksnake found by the writer on the island, previous to the one at Silver Lake Park, was on May 18, 1914, near Ward Point, Tottenville, when a dead one was discovered. As usual in such cases it was being devoured by burying beetles.

Records of Flies Belonging to the Family Hippoboscidae Chiefly from Staten Island, New York¹

WILLIAM T. DAVIS

Recently Dr. Joseph Bequaert, in going over the Diptera in the writer's collection, determined the species of the above-mentioned family, which are remarkable because the larva remains in the body of the mother until it is mature and ready to enter the pupal state. In one instance we are unable to give the host on which the specimen was found. In New Jersey there have been reported but five species belonging to this family, three of which are here recorded from Staten Island. All are parasites on birds.

Ornithomyia anchineuria Speiser (*pallida* Say). Yankee Lake, Wurtsboro, Sullivan Co., Sep. 8, 1905, on Maryland yellowthroat (James P. Chapin). Richmond, Staten Island, Sep. 8, 1907, on Carolina wren (James P. Chapin).

¹ Read at the regular meeting of the Institute October 19, 1920.

Olfersia americana Leach. Yankee Lake, Wurtsboro, Sullivan Co., Sep. 6, 1905, on broad-winged hawk (James P. Chapin). Staten Island, Nov. 24, 1904. Freeport, Long Island, Sep. 13, 1913, on marshhawk (Henry Thurston).

Pseudolfersia maculata Cog. Staten Island, May 20, 1905, and Sep. 1, 1906, on fishhawk (James P. Chapin).

A Staten Island Bee Tree¹

WILLIAM T. DAVIS

The severe storm of September 30, 1920, blew over or otherwise damaged many trees on the island, and among them a red oak near Great Kill, which had its top blown off. The damage to the tree disclosed the fact that honeybees had occupied a cavity in the trunk about three feet in length and twenty-five feet from the ground, for a number of years, for much of the honeycomb appeared old. A large part of the nest had fallen with the top of the tree, and the comb was lying about on the ground. It was being visited at the time of discovery, October 3, 1920, by many *Vespa communis*, *Vespa crabro*, and several *Bombus impatiens*, also a number of flies. Thus many insects profited by the misfortune to the honeybees.

¹ Read at the meeting of the Nature Study Club October 1920.

Natural History Records from the Meetings

WILLIAM T. DAVIS

SECTION OF NATURAL SCIENCE

A meeting was held in the Public Museum April 12, 1919. The following items were presented and discussed: Mr. Wm. T. Davis read an article published in the *Staten Island Daily Advance* of March 15, 1919, which gave the impression that the seventeen-year "locusts" were to appear on Staten Island this year in great numbers. He read from published articles in the PROCEEDINGS OF THE NATURAL SCIENCE ASSOCIATION OF STATEN ISLAND, based on data gathered in 1885 and 1902, to show that there would probably be no cicadas or but very few on the island in 1919.

Mr. Davis stated that on certain of the warm days during the mild winter just past, insect life was often quite active. On January 15, 1919, the wasp *Polistes pallipes* LeP. was found walking along the sidewalk on Vanderbilt Avenue; on January 30 the beetle *Amara angustata* Say, and a female ant, *Acanthomyops claviger* Roger, were observed walking about in the Clove Valley; on February 15, following a warm rain, the slug *Limax maxima* was seen on the sidewalk on St. Pauls Avenue, and on February 16 a second female *Acanthomyops* was found on the sidewalk in Tompkinsville.

He also showed a fine Indian mortar found in the field near Ward Point, Tottenville, March 22, 1919. The weathered stone had been hollowed by constant use, and the depression so made was conspicuously lighter in color.

Dr. Arthur Hollick read a letter from Dr. Arthur H. Graves of the Bureau of Plant Industry, U. S. Dept. of Agriculture, dated Oct. 20, 1918, in which he stated that the specimen of *Globiformes graveolens* presented to the Institute had been collected at Pleasant Plains, Staten Island. In *Mycologia* 10: 267, Sep. 1918, Dr.

W. A. Murrill has this to say of the species: "Specimens of *Globiformes graveolens* were recently collected by Professor A. H. Graves on a living red oak trunk near New Dorp, Staten Island. This very curious and very interesting tree-destroying fungus was first described from Georgia by Schweinitz and is of rare occurrence on oak, beech, and maple as far north as Pennsylvania and as far west as Iowa. This is the first time it has been found within the local flora range."

Doctor Hollick spoke of the spread of *Tussilago farfara* L., introduced from Europe, on Staten Island. It was reported by Dr. N. L. Britton at Garretsons (PROC. NAT. SCI. ASSOC. STATEN IS. 4: 51, Nov. 10, 1894 (leaves only). Doctor Hollick reported finding some plants in flower March 31, 1895 (See PROC. NAT. SCI. ASSOC. STATEN IS. 4: 72, Apr. 13, 1895). This was our only local record. During recent years it has become quite common in waste places at St. George (freight yards, street sides, etc.).

Mr. Davis noted the occurrence of this plant (coltsfoot) along the Turnpike adjoining Woodland Cemetery, Dr. Philip Dowell at Port Richmond, and Mr. E. J. Burns at Fort Wadsworth.

Mr. Edw. J. Burns exhibited a tiger beetle, *Cicindela repanda* Dej., captured on the beach at Sands Point, Long Island, Sep. 15, 1918. When first observed, one of the hind legs of the beetle was caught between the valves of a small dead mussel, *Mytilus edulis* L., about a quarter of an inch in length, which had opened slightly to form an angle of about ten degrees between the shells. The beetle would fly to a height of about a foot, when the weight of the shell would pull it down again.

A number of specimens of a fly belonging to the genus *Platy-chirus*, whose legs had become entangled in the fruit of reedtop grass, *Agrostis alba* L.; the rare syrphid fly *Brachypalpus rileyi* Will., taken at Richmond on March 25, 1919, and a specimen of the introduced beetle *Carabus nemoralis* Mull., found at New Brighton on June 2, 1918, were also shown by Mr. Burns.

Mr. Charles W. Leng presented a List of the Cerambycidae of Staten Island, with notes on their food habits, to be incorporated with the List of Coleoptera of Staten Island, New York, when published.

STATEN ISLAND NATURE CLUB

A meeting attended by Miss Alice L. Bailey, R. Edgar Bell, Edward J. Burns, Miss Miriam A. Campbell, Miss Mary Wood Daley, Carol Stryker, and William T. Davis was held in the library of the Public Museum, corner of Stuyvesant Place and Wall St., St. George, Staten Island, N. Y., on April 28, 1919, at 7.45 p.m.

The purpose of the meeting was to organize a Nature Club having for its object the encouragement of the study of natural science and the preservation of natural objects from wanton and unnecessary destruction.

It was decided that such a club be organized and that those present be considered as charter members. Miss Miriam A. Campbell was elected president, and Mr. Edward J. Burns secretary. It was decided to hold a regular meeting each month except July and August.

At this meeting Mr. Wm. T. Davis exhibited his collection of Staten Island tiger beetles, embracing the following eleven species: *Cicindela generosa* Dej., *C. purpurea* Oliv., *C. duodecimguttata* Dej., *C. repanda* Dej., *C. hirticollis* Say, *C. tranquebarica* Hbst., *C. modesta* Dej., *C. sexguttata* Fab., *C. punctulata* Oliv., *C. dorsalis* Say, and *C. marginata* Fab. He stated that *C. dorsalis* used to be common on South Beach in July and August but was exterminated about the year 1892.

Mr. Davis also mentioned seeing a cliff swallow on April 26 flying up and down St. Pauls Avenue, close to the ground, on the sheltered side of Ward Hill. On the previous day it was cold, with a temperature of 27° F., and on the morning of the 26th there was a little snow, which probably accounted for the actions of the bird.

Messrs. Edgar Bell and Carol Stryker and Miss Campbell reported finding the nest of a redshouldered hawk in the woods on Todt Hill on April 19, 1919; and Miss Bailey and Mr. Bell reported a dead great-horned owl on Todt Hill on April 20, 1919.

The meeting of May 12, 1919, was held in the Public Museum.

Mr. Carol Stryker recorded a wood duck seen May 4, 1919, in the Todt Hill woods and exhibited one hunting and one war arrowhead found in the Little Clove Valley, one hunting arrowhead from Martling Pond, Clove Valley, and arrowheads from Todt Hill.

Mr. Edw. J. Burns exhibited a small specimen of *Tropaea luna* forma *rubromarginata* Davis, captured in Cameron's woods on May 2, 1919, and stated that it was a variety found only in the spring. He also showed the beetle *Buprestis decora* Fab., taken at Tompkinsville on May 9, 1919, and a syrphid fly, *Callicera johnsoni* Hunter, taken at Grasmere April 27, 1919. Both of these insects are new to Staten Island. The Buprestid may have emerged from lumber in one of the yards near by.

Mr. Wm. T. Davis exhibited a nest of the blue-gray gnatcatcher, *Poliophtila coerulea caerulea*, collected after the breeding season by Col. Wirt Robinson at Wingina, Virginia, August 1916. The nest is very beautiful, being made of plant fibers; the walls are high and thick, while the outside is adorned with lichens.

Mr. Edgar Bell reported a cardinal's nest in Silver Lake swamp May 3, 1919. It contained one egg at the time.

The meeting of June 2, 1919, was held in the Public Museum. A letter was read from Mr. Howard H. Cleaves stating that purple martins had visited a birdhouse at Princes Bay several times during May, though they did not stay. He also mentioned a considerable number of blue-winged warblers near Huguenot, he having heard three males singing at one time.

Mr. Edw. J. Burns exhibited the rare beetle *Gnorimus maculosus* Knoch, found on the trunk of a tree near Rockland Avenue and Manor Road on May 23, 1919; also an olive-backed thrush which died on the porch of the Museum on May 24, 1919. It was

picked up by Mr. Samuel Snell, who saw it fall from the roof, flutter about for a short time, and die.

Mr. Edgar Bell told of a catbird having followed him for twenty feet from her nest, giving vigorous chase; he also exhibited an unusually small hen's egg.

In answer to a question Mr. Davis explained how a part of Todt Hill, near the iron mines, had not been passed over by the glacier and consequently had a surface of yellow gravel, and supported a somewhat different flora from the adjoining region.

The meeting of September 15, 1919, was held in the Public Museum.

Mr. Wm. T. Davis showed the ornate caterpillar of *Apatela funeralis* Grote & Robinson, found on the sidewalk, St. Marks Place, Sep. 5, 1919. The species feeds on maple.

Mr. Edw. J. Burns recounted some of his experiences in company with Mr. Davis at Wading River, Long Island, from Aug. 31 to Sep. 4, 1919, during which time they visited Long Pond, Deep Pond, and Grass Pond. Many interesting insects were found. In their experience with birds they had had the rare pleasure of seeing the newly hatched chicks of the bobwhite in their nest in a vegetable garden. The large end of the egg is partly cut around by the emerging chick, and forms a lid, which is lifted up when the chick makes its escape. It was raining when the young bobwhites hatched, so they stayed in the nest until the sun shone.

Mr. Chas. W. Leng read articles from the Staten Island and New York City papers in reference to the pink katydids found on the island.

Mr. Carol Stryker spoke of his observations on the flight of the common hummingbird and exhibited a section of the trunk of an American elm, cut lengthwise, exposing the interesting nest of a downy woodpecker. The nest was found in the vicinity of Silver Lake. It was presented to the museum.

The meeting of October 13, 1919, was held in the Public Museum.

Mr. Edward J. Burns recorded the following horseflies as additions to the Tabanidae of Staten Island, N. Y., published in these PROCEEDINGS for 1917: *Chrysops moechus* O. S., Richmond, July 12, 1919. *Tabanus sulcifrons* Macq., Watchogue, Aug. 19, 1917, and July 27, 1919; one specimen collected at Richmond July 13, 1919 (Miss Campbell). *Tabanus bicolor* Wied., Watchogue, June 29, 1919. *Tabanus superjumentarius* Whitney, Richmond, July 13, 1919. *Merycomyia whitneyi* Johnson. A specimen in the museum of the Staten Island Inst. labeled "Clove Valley, Staten Island, N. Y., C. L. Pollard, Collector" is the only record for the island of this handsome fly.

Mr. Wm. T. Davis recorded a specimen of the little brown snake, *Storeria dekayi* Holbrook, found dead on the sidewalk, St. Pauls Avenue, Oct. 11, 1919; also the southern armyworm moth, *Alctia argillacea* Hbn., found on the island Oct. 12, 1919. The great abundance of this moth on the island in some past years was spoken of. Mr. Davis reported having seen the wasp *Vespa diabolica* Sauss. carrying off bits of cooked lobster on Ocean Terrace road, Staten Island. The pieces were about 3 mm. in diameter. Discussion followed, in which it was pointed out that certain species of *Vespa*, such as *diabolica*, have a decided preference for carrion, while others, such as *V. crabro*, prefer decayed fruit, and *V. maculata* spends much of its time in catching flies.

Dr. Joseph Bequaert told some of his collecting experiences in Africa and described some interesting methods of capturing Diptera, which could be well applied on Staten Island. One of the most profitable methods was to station a man beside the nests of a fly-catching *Bembex* wasp, and to rob the wasps as they returned with their prey. After taking the fly away from the wasp she was released and would return for more. Horseflies have the habit of entering a tent or covered automobile and resting on the sides and top, where they are easily bottled. The desirability of collecting in the vicinity of excrement was emphasized, since many insects will be found there that are rare elsewhere. This is just as true

of butterflies, Hymenoptera, and flies, as it is of beetles. Doctor Bequaert also explained how in collecting some of the rare species of *Cypræa* a freshly removed cowhide was lowered into the water, and upon its being drawn up after a time these molluscs would be found clinging to the hide.

The meeting of November 10, 1919, was held in the Public Museum.

Mr. Charles W. Leng exhibited a male and female of the rare and interesting beetle *Dinapate wrighti* Horn, recently obtained from Richard Garnett, who found them in the stems of the Wellington palm, a species confined to a very restricted area about 100 miles east of Pasadena, California. *Bostrichus bicornis* Web., a beetle of the same family living on Staten Island, was also shown, to contrast the great difference in size between the "living fossil" from California, $1\frac{1}{4}$ in. in length, and one of its closest relatives.

Mr. Wm. T. Davis exhibited several living European crickets, *Gryllus domesticus* L., collected Nov. 10, 1919, at the home of Mrs. Hucklenbrach, Princes Bay, Staten Island, where their song had been very disturbing to members of the family at night. Mr. Davis also exhibited the turtle *Kinosternum pennsylvanicum* from Nelson County, Virginia, nearly 150 miles from the mouth of the James River, where the species is not uncommon. On Staten Island it appears to be confined to the borders of the salt marshes. He had also collected the small poisonous snake *Tantilla coronata*, found under a stone in Buckingham County, Virginia, near the James River, July 15, 1917. According to Mr. E. R. Dunn there has been no record of the species north of Raleigh, N. C. (*Copeia* 1919, p. 100).

The meeting of January 12, 1920, was held in the Public Museum.

Miss Miriam Campbell related some of her experiences with Tachinid and ichneuman parasites of the large caterpillars she has raised and studied.

Mr. Carol Stryker reported having seen a flock of about forty redpolls near White's pond, Ocean Terrace, Staten Island, Jan. 11, 1920.

Mr. E. J. Burns exhibited a study skin of a white-winged scoter prepared by him. He had found the bird dead on the shore at Sands Point, Long Island, on Jan. 1, 1920.

Mr. Charles W. Leng read a paper on Beetles that Live in Seeds, illustrating his remarks with specimens. He mentioned the species recorded from Staten Island the food plants of which are known, as well as those the food plants of which have so far not been discovered. He spoke especially of the fact that no beetle had as yet been identified with beechnuts, and urged the members to look for such infested nuts, so that the beetle, if there is one, may be detected.

The meeting of February 9, 1920, was held in the Public Museum.

Mr. Charles W. Leng read extracts from the manuscript autobiography of the late David M. Van Name, in which are described many things of interest on Staten Island in olden days, including a barbecue, the brick industry, the oyster fisherman, and the old horseboat ferry. (See p. 43.)

Mr. Wm. T. Davis exhibited the earwig *Doru lineare* Esch., found in spinach Feb. 4, 1920. As this species is known to occur in Texas, the spinach was probably imported to Staten Island from that state. In January 1916 the earwig *Labidura bidens* Olivier was found on the island in a head of lettuce. This species is common in the southeastern United States.

Mr. Davis stated that on Jan. 25, 1920, in company with Mr. Chas. H. Rogers, of the American Museum of Natural History, he had seen at Great Kills, Staten Island, a male white-winged crossbill and four American crossbills eating ambrosia seeds.

The meeting of March 8, 1920, was held in the Public Museum.

The following list of birds observed on Staten Island, N. Y., Monday, Feb. 23, 1920, by Messrs. H. C. Hasbrook, Van Dyne,

Barnes, J. P. Chapin, and H. H. Cleaves, was presented. The observers were afield from 7.45 a.m. to 5 p.m. Temperature 36 to 40° F. Sky overcast. Wind light, east. Ground snow-covered. Territory Tottenville to Great Kills on foot, to New Dorp by train and through the Moravian Cemetery on foot.

(Birds are listed in order seen.) Herring gull 500 to 600, estimated. Crow about 50. Horned grebe 1. Junco about 25. Starling 30 to 50. White-throated sparrow 1 (Tottenville), feeding at refuse dump. Song sparrow 4, two singing. Blue jay 10. Sparrow hawk 4. Golden-eye 9 or 10. Buffle-head flock of about 10, sexes evenly divided. Horned lark 2. Meadowlark about 15. Red-winged blackbird 2 males and 2 females observed in company with starlings and meadowlarks. Holboell's grebe 4 at Princes Bay. Goldfinch 3. Myrtle warbler 3. Scaup duck 7 (Huguenot Park). Redbreasted merganser 1 (Princes Bay). Redshouldered hawk 1 (Huguenot Park). Cardinal 1 (Annadale). Chickadee 1 (Annadale). Barred owl 1 (Robinson's woods, Great Kills). Great black-backed gull 5 (Great Kills). Redpoll 25 (New Dorp). Tree sparrow several at New Dorp; one at feeding station in Moravian Cemetery. Saw-whet owl 1 (Moravian Cemetery). Longeared owl 25 to 30 in several groups, Moravian Cemetery. *Miscellaneous*: Signs of screech owl noted in three different tree cavities and nesting boxes at Pleasant Plains, Princes Bay, and Huguenot Park, respectively. Beneath one of the holes, on the ground, were found the entrails of a mouse, and inside of the cavity were the remains of half a meadow mouse. In the second roost (a Berlepsch box) was found a mass of starling feathers and two lower mandibles from starlings, one from an adult and one from an immature bird; also English sparrow feathers. The third place examined contained numerous screech-owl pellets. Several gray squirrels were seen (Tottenville and Great Kills) and numerous tracks. Track of ring-neck pheasant noted at Great Kills near the Boulevard.

Mr. Wm. T. Davis stated that on Feb. 20, 1920, he had seen six female and one male evening grosbeaks on the wooded slope

of Ward Hill, where it borders St. Pauls Avenue, Tompkinsville. The birds were on the areas free from snow.

The snowstorm of February 7 was discussed and photographs of the considerable drifts on Stuyvesant Place were shown. A list of some of the remarkable storms of the past, by Mr. Leng, was read.

The meeting of April 14, 1920, was held at 8.30 p.m. in the Public Museum.

Mr. Carol Stryker and Mr. Edgar Bell reported seeing a large flock of golden-crowned kinglets, a number of ruby-crowned kinglets, and three great blue herons on April 3, 1920; also an osprey, phoebe, field sparrow, and myrtle warbler on April 10, 1920.

Mr. Wm. T. Davis exhibited specimens of staghorn sumach (*Rhus typhina* L.) recently collected at Princes Bay near the lighthouse. The bushes had been cut off close to the ground by rabbits during the past severe winter. He also showed the gnawings of field mice on various trees and pointed out the difference in the work. The rabbits cut deep into the wood, leaving the marks of their large incisor teeth. That of the mice is considerably finer and the teeth marks smaller. A collection of *Cecropia* cocoons opened by mice and woodpeckers was also shown. The woodpeckers make a hole in the middle of the cocoon, while the mice cut out the bottom or sides to get at the pupa within. Some of the cocoons opened by mice were found $5\frac{1}{2}$ ft. above the ground.

The aurora borealis of March 22, 1920, was generally discussed and the trouble caused by these electrical activities to telephone and telegraph operation commented upon. In Canada, where this phenomenon is more common, the disturbances are a source of considerable trouble to telegraphers, who refer to the aurora as "Rorey."

Mr. Chas. W. Leng spoke on Protozoa, illustrated by lantern slides. He compared the different classifications of Linné 1758, Lamarck 1794, Cuvier 1812, Huxley 1878, the Standard Natural History 1885, and Pratt 1916, pointing out the great difference of

opinion among authorities as to the position and relative importance of the Protozoa in the classification of animals. He then described the typical species beginning with the simple amoeba, and advancing up through the more complicated forms, ending with an interesting description of the *Trypanosoma* and other blood parasites. Special attention was given to those forms that are of economic importance and directly affect human beings.

The meeting of May 27, 1920, was held at 8.30 p.m. in the Public Museum.

Mr. Edw. J. Burns recorded the finding of a large snapping turtle in Cameron's woods, Staten Island, May 11, 1920. It was a female, weighed 13 lbs., and from nose to end of the tail was 32 inches in length. Also the butterfly *Thecla irus* from Great Kills May 17, 1920.

Mr. Edgar Bell and Mr. Burns stated that they had seen a flock of about twenty black-crowned night herons at Oakwood April 25, 1920.

Mr. Wm. T. Davis exhibited some twigs of pitch pine and red cedar from the Blue Hills near Boston, Mass., that had been gnawed by mice during the past winter, and referred to his exhibit of similar specimens at the last meeting.

Mr. Edgar Bell stated that he had lately examined a crow's nest containing five eggs at Watchogue.

The meeting of September 22, 1920, was held at the residence of the president, Miss Miriam A. Campbell, 275 Watchogue Road, Westerleigh.

Mr. Wm. T. Davis exhibited the beetle *Calosoma sycophanta* L., collected in the garden of his home, 146 Stuyvesant Place, St. George, June 1920, and read extracts from U. S. Dept. of Agriculture Bulletin No. 101, 1911, by A. F. Burgess, which gives a detailed account of the introduction of this beneficial insect into the United States. Adults of this species have been kept alive for two years. This is the first record of this beetle from Staten Island, though it has been found on Long Island for several years

past. Mr. Davis also exhibited four pink katydids, *Amblycorypha oblongifolia*, from West New Brighton. They were collected by Mr. C. A. Ingalls, Miss Campbell, Mr. Campbell, and Carol Stryker.

Mr. Charles W. Leng read extracts from Daniel Denton's Brief Description of New York, London 1670, reviewed in Proc. STATEN Is. Assoc. April 1906. The original work gives an enthusiastic description of the heavy forests, of the bear, deer, wild turkeys and the like, to be found on Staten Island and in the vicinity at the time of Denton's visit.

The meeting of October 30, 1920, was held at the residence of the president, Miss Miriam A. Campbell, 275 Watchogue Road, Westerleigh.

Mr. Edw. J. Burns exhibited a specimen of the somewhat recently imported European onion fly, *Eumerus strigatus* Fallén, collected in the Clove Valley May 28, 1920.

Dr. Joseph Bequaert spoke on the spitting habits of some snakes in the tropics apropos of an incident narrated by Mr. Carol Stryker of his experiences with a garter snake a few days previously in a walk through the woods. Specimens of caterpillars, which form an important article of food among the natives of the Belgian Congo, were shown by Doctor Bequaert, and many amusing incidents relative to the use of insects as food were told by him.

The meeting of November 27, 1920, was held at the residence of Mr. Wm. T. Davis, 146 Stuyvesant Place, St. George.

Mr. Lynn W. McCracken showed a pearl found by him in an oyster stew.

Mr. Carol Stryker described the action in flight of a sparrow hawk about to seize its prey.

Mr. Wm. T. Davis exhibited a collection of symmetrically shaped stones, mostly from Staten Island, and commented upon the more common oblong, flattened form, as distinguished from the eggshaped and rounded specimens.

The importance of planting trees along the streets and inland roads of the island was discussed by all present, and the fact that the city authorities had done so little in this respect was lamented.

The meeting of December 29, 1920, was held at the residence of the president, Miss Miriam A. Campbell, 275 Watchogue Road, Westerleigh.

Mr. Lenwood Bacher showed the eggs of *Microcentrum rhombifolium* (Saus.) collected at Princes Bay. This species of katydid lays its eggs along a small twig or the edge of a leaf, one egg neatly overlapping the other.

Mr. Chas. W. Leng showed the flea-beetle *Haltica knabi* Blatchley, among material determined from the island by Mr. H. C. Fall.

Mr. Edw. J. Burns exhibited several field mice collected at Sands Point, Long Island, which he had collected by encouraging a dog to dig them out, and then taking them away before the dog had time to swallow them.

Mr. Wm. T. Davis read extracts from two papers by Arthur Jacot, which appeared in *The Nautilus* for January 1919 and April 1920. The first is entitled Marine Mollusca about New York City and records about 45 species from Staten Island collected at three definite stations between Fort Wadsworth and Great Kills. The second paper is On the Marine Mollusca of Staten Island, N. Y., and deals with species collected in the summer of 1919 at Great Kills and vicinity. "We found but few species," is the author's comment. He states that "*Modiolus demissus demissus* is found very thinly scattered among the individuals of the northern form [*M. d. plicatulus*]. That the southern variety was once the predominant form over this area is evident from the fact that the sod banks on which *plicatulus* is now living contain the dead valves of the southern form exclusively, in large numbers and buried to a depth of 8 or 10 inches below the surface in company with *Mya arenaria*."

All present at the meeting expressed their regret at the cutting down of most of the trees in Silver Lake Park and the burning

over of the ground. There were many natural features to start with in the laying out of a park and it was pointed out how similar conditions had been carefully preserved in the portions of Bronx Park under the care of the Botanical Garden and the Zoological Society.

The meeting of January 29, 1921, was held in the Public Museum.

Miss Miriam Campbell reported having heard meadowlarks singing in the vicinity of her home in Westerleigh for some days previous to the meeting.

Mr. Edw. J. Burns made a short address on Staten Island Indians, illustrated by lantern slides, covering the relation of the local Indians to other North American tribes, their domestic life, methods of hunting, fishing, dress, and customs.

Mr. Edward Avis played violin selections and imitated bird calls, accompanied by lantern-slide effects. His recital was much appreciated and received with enthusiasm.

The meeting of March 23, 1921, was held in the Public Museum.

Mr. Edw. J. Burns exhibited his collection of Asilidae and Dolichopodidae and spoke briefly of the habits of these two families of predaceous flies.

Mr. Chas. W. Leng showed a museum exhibit illustrating the scientific classification of insects. A line drawn down the center of the case separated the insects having a complete metamorphosis from those in which it is not complete. All orders were represented by specimens from each large family, special care being taken to select species most likely to be found and having popular names easily recognized and remembered by the average person. The method of arrangement clearly brought out many facts in insect relationship, especially the general structure, number of species living at the present time, etc.

The meeting of April 27, 1921, was held at the residence of Mr. Chas. W. Leng, Clove Road, West New Brighton.

Mr. Leng spoke of the movement to have a piece of Silver Lake

Park set apart to be cared for by the Staten Island naturalists, in order to keep it in as natural a condition as possible.

Mr. Wm. T. Davis stated that he had received a number of egg masses of the praying mantis, *Paratenadiera sinensis*, from Mr. Philip Laurent of Philadelphia, and had placed them in suitable situations on Ward Hill, Tompkinsville, and at Tottenville, where it is hoped they will flourish like the colony at Arlington, Staten Island. While distributing these egg masses on the thick, tangled growth of oriental honeysuckle near the beach at Tottenville, he saw a turkey buzzard alight on the beach, and succeeded in approaching quite near to the bird. As an early record he mentioned seeing the "little blue butterfly" *Lycaena pseudargiolus* on March 28. Specimens of the scale insect *Lecanium nigrofasciatum* on twigs of the oriental sycamore, St. Pauls Avenue, Tompkinsville, were also shown.

A series of water-color sketches of insects, mostly Lepidoptera, by Mr. Ernest St. C. Jeans were shown and their excellence commented upon.

The meeting of May 18, 1921, was held at the residence of Miss Miriam A. Campbell, 275 Watchogue Road, at 8.15 p.m.

Mr. Carol Stryker, and other members, reported a very successful walk of the Bird Club on May 14, when about fifty species were seen. Twelve rosebreasted grosbeaks were observed, a rather unusual number.

Mr. Wm. T. Davis spoke of a pear tree close to the Watchogue Road near Miss Campbell's home, 6 ft. 3 in. in circumference and about 50 ft. high. This is an unusual size for a pear tree. He also related his experiences in tracing a sealion reported in the local papers to have been killed at Kreischerville. After much inquiry and persuasion he succeeded in seeing a portion of the skin in the shop of a local upholsterer. It seems to have been a sealion rather than a seal.

Mr. Edward Avis favored the members with imitations of bird calls and songs, and selections on the violin, which were much appreciated.

Literature Relating to Staten Island

THE WOMEN OF THE AMERICAN REVOLUTION, by Elizabeth F. Ellet, New York, 1850. First edition was printed in two volumes, 1848.

This is a collection of sketches of women more or less prominent during the Revolutionary War, and includes (v. 2, p. 289-292) anecdotes of Mrs. Dissosway, of Tottenville, and of Mrs. Jackson, both of which appear in Bayles' History of Richmond County (p. 232-233) though in somewhat different words. The story of Margaret Moncrieffe is also told and of course contains reference to Staten Island as (v. 3, p. 366-367) "my chief delight was to view with a telescope our fleet and army at Staten Island."

THE NEW YORK GENEALOGICAL AND BIOGRAPHICAL RECORD.

Our library has recently acquired by exchange several numbers of this publication which contain references to Staten Island, viz.:

Vol. IV, no. 1, Jan. 1873. Marriage of Thomas Carhart, of Staten Island, and Mary Lord, on Nov. 22, 1691.

Vol. IV, no. 2, Apl. 1873. Records of the Society of Friends of N. Y.

Vol. IV, no. 3, July 1873. English and Dutch Intermarriages.

Vol. X, no. 4, Oct. 1879. Records of the Reformed Dutch Church of N. Y.

Vol. XI, no. 2, Apl. 1880. Records of the Reformed Dutch Church of N. Y.

Vol. XVII, no. 2, Apl. 1886. Cornelius and William H. Vanderbilt.

Vol. XX, no. 1, Jan. 1889. Huguenot Settlers in Monmouth Co., New Jersey.

Vol. XX, no. 2, Apl. 1889. Corrections to preceding.

Vol. XXV, no. 2, Apl. 1894. Staten Island Marriages (a few only).

Vol. XXX, no. 4, Oct. 1899. Cornelius Vanderbilt.

Vol. XXXIV, no. 3, July 1903. A List of Settlers on Staten Island. This list, copied from New York Colonial Manuscripts, vol. XII, folio 68, gives the names of those who survived the Indian massacre of 1655. The only family names later found in Staten Island history are Jansen and Post.

Vol. LI, no. 3, July 1920. Francis Lovelace. Governor of New York, 1668-1673, by J. Hall Pleasants, M.D. The identity of the governor, previously disputed, is established and an interesting story of his life is given. It appears that he was born about 1622, the third son of Sir William Lovelace, of Kent, England, and that he was an ardent royalist in the days of Cromwell and of Charles I and II. He served in the civil wars with the rank of colonel and was governor of Carmathan Castle when it capitulated to Cromwell in 1645. He visited Long Island and Virginia in 1650 and was probably on the continent in the service of Louis XIV in the interval. He spent two years in Virginia and was thereafter for a few years in exile with Charles II, being described in 1657 as one of the fifty young bloods forming that monarch's retinue. During 1659 he took part in abortive uprisings in England. After the restoration he appears to have received a position in the Admiralty as the reward of his loyalty and in 1667 was made governor of New York. His administration is described as a benevolent autocracy, his most important acts being the establishment of a merchants' exchange and a regular mail route in 1673. His official residence was Fort James, where it is said he was surrounded with a degree of state out of keeping with the crudity of the environment. He had also a large plantation on Staten Island, near what is now New Brighton, and his brothers, Thomas and Dudley, had similar plantations near by, all of which have been studied by Edward C. Delavan, Jr., to whose accuracy the paper under review repeatedly testifies. In 1673 Lovelace's plantation was plundered by the Dutch. The capitulation of Fort James on July 30 of the same year by his brothers, while Lovelace was nego-

tiating further post routes with Gov. Winthrop at Hartford, hurt his reputation. The debts on his plundered plantation involved him in pecuniary difficulties. He was arrested for debt and after his return to England he was tried for permitting the surrender of Fort James to the Dutch. His illness of dropsy stayed the proceedings and he died in the latter part of 1675, without issue, having lived his troublesome 55 years as a bachelor. Doctor Pleasants takes pains to dispel the oft-repeated errors that have confused the Governor's name with that of his cousin Francis Lovelace, who married Ann King and was the ancestor of John Lovelace, governor of New York in 1709, and with that of another Francis Lovelace, recorder of Canterbury, and of still another Francis Lovelace who died in Maryland in 1684. This last Francis Lovelace may have been the son of the governor's brother Thomas, whose connection with Ellis Duxbury's glebe has been elucidated by Mr. Delavan. These interesting data relating to Lovelace were brought to the attention of the publication committee by Mr. Royden Woodward Vosburgh.

STATEN ISLAND CHURCH RECORDS. Collections of the New York Genealogical and Biographical Society, vol. IV, New York, 1909.

This volume contains records of baptisms from 1696 to 1772 in the Dutch Reformed Church of Port Richmond; of births and baptisms from 1749 to 1853, of marriages from 1764 to 1863, and of deaths and burials from 1758 to 1828, in the Moravian Church at New Dorp; also of births and baptisms from 1752 to 1795, and of marriages from 1754 to 1808, in St. Andrew's Church at Richmond. It has been acquired by exchange for our library and is invaluable in genealogical search.

THE GEOLOGY, FAUNA, AND FLORA OF THE LOWER HUDSON VALLEY. Pamphlet by Edmund Otis Hovey, Frank M. Chapman, and N. L. Britton, presented to Eighth International Congress of Applied Chemistry, New York, Sept. 8, 1912.

This gives a concise sketch of the region from Newburgh to the sea with a map. Staten Island is described as "a large area of altered serpentine rocks," as well as the "Raritan clays of Cretaceous age which are partly covered with a thick mantle of Glacial Drift" and the "Newark sandstones and shales of Jura-Trias" and the "Palisades Diabase, intrusive igneous rocks." The Carolinian character of the fauna is referred to on p. 9, and the occurrence of many plants of characteristically southern distribution is emphasized on pages 10 and 11.

CHRONOLOGICAL RELATIONS OF COASTAL ALGONQUIAN CULTURE, by Alanson Skinner, Proceedings Nineteenth International Congress of Americanists, Washington, December 1915.

In this paper Mr. Skinner shows that the archeological remains in coastal New York and New Jersey are not contemporaneous and illustrates arrowpoints of archaic diamond-shape type from a shell heap at Rossville.

A NEW SPECIES CLOSELY RESEMBLING *DROSOPHILA MELANOGASTER*, by A. H. Sturtevant, in *Psyche*, vol. XXVI, p. 153-155, December, 1919.

In this paper *Drosophila simulans* is described and among the type localities "Staten Island, N. Y. (F. Schrader)" is included.

THE "OLD FORT" AND CAMP-SITE AT RICHMOND, STATEN ISLAND, by Reginald Pelham Bolton, in The New York Historical Society Quarterly Bulletin, vol. III, p. 82-88, October 1919.

This illustrates and describes the old fort and its exploration by the author, Mr. W. L. Calver, Mr. Robert M. Hartley, and Mr. Oscar Barck. The work was done on Sundays in 1918 and resulted in finding as many as thirty military buttons in a day beside other articles of interest. Mr. Calver, who was chairman of the Committee on Field Exploration, lectured at the Institute meeting of March 20, 1920, and exhibited many of the articles unearthed.

EXPLORATION OF ABORIGINAL SITES AT THROG'S NECK AND CLASON'S POINT, NEW YORK CITY, by Alanson Skinner, in Contributions from the Museum of the American Indian, vol. V, no. 4, p. 49-126, 1919.

There are specific references to Staten Island on many pages, viz.: 59, 95, 97, 98, 100, 102, 103, 104, 112, 117, 118, and 120. The entire paper, especially in respect of foods used by the Indians, is important to the student of our aboriginal population.

MUSEUM WORK, vol. II, no. 4, January 1920.

The pink katydid, found by Raymond Clark, and our collection of pink insects, are noticed on p. 106. The exploration of the old fort at Richmond for revolutionary relics is noticed on p. 110. Our museum is mentioned on p. 125 among some that "constitute the acme of museum attainment" but the author evidently has the larger museums of New York and Brooklyn principally in mind.

NOTES ON AMERICAN LEPIDOPTERA WITH DESCRIPTIONS OF NEW VARIETIES, by Frank E. Watson and Wm. P. Comstock, in Bulletin American Museum of Natural History, vol. XLII, p. 447-459, 1920.

The butterfly *Heodes hypophlaeas hypophlaeas* ab. *fulliolus* (Hulst) is reported from Staten Island, May 20, 1919, caught by O. Fulda. The form *fasciata* Strecker is also said to be of frequent occurrence at Fox Hills. A new name, *Incisalia polios* ab. *davisi*, is proposed in honor of Mr. William T. Davis.

C. W. L.

ORTHOPTERA OF NORTHEASTERN AMERICA WITH ESPECIAL REFERENCE TO THE FAUNAS OF INDIANA AND FLORIDA, by W. S. Blatchley, 784 pages, Indianapolis, 1920.

MANUAL OF THE ORTHOPTERA OF NEW ENGLAND, INCLUDING THE LOCUSTS, GRASSHOPPERS, CRICKETS AND THEIR ALLIES, by Albert P. Morse, Proc. Boston Soc. Nat. Hist. XXXV, p. 197-556, 1920.

References to the fauna of Staten Island are numerous in these important works on Orthoptera, particularly in the first named, and two species originally described from the island are recognized. These are *Neoconocephalus exiliscanorus* Davis and *Oecanthus exclamationis* Davis. The following is a comparison of the named species and forms considered:

	Eastern N. A.	New England	Staten Island
Earwigs	12	6	3
Cockroaches	32	17	7
Mantids	9	3	1
Walking-stick insects	12	2	1
Shorthorned grasshoppers	174	52	40
Longhorned grasshoppers	111	33	26
Crickets	61	19	20
	411	132	98

W. T. D.

THE NEW PRESIDENT OF THE AMERICAN ASSOCIATION. Sci. American 123: 631, with portrait. Dec. 25, 1920.

This is an appreciative sketch, by Dr. Marcus Benjamin, of Dr. Leland Ossian Howard, the recently elected president of the American Association for the Advancement of Science. His scientific activities are briefly outlined in the text, which is illustrated by an excellent portrait of the subject of the sketch. Doctor Howard was elected to corresponding membership in the Staten Island Association of Arts and Sciences April 6, 1907,—the first person selected for that honor by our board of trustees. At the regular meeting of the Association, Feb. 17, 1912, Doctor Howard delivered, by invitation, the announced lecture of the evening, on "The Necessity for a National Quarantine against Injurious Insect and Plant Diseases."

A. H.

NEW WORLDS TO CONQUER. Not signed. *Scientif. American* 121: 254, 268, *four text fig.* Sept. 13, 1919.

This somewhat ambiguous and non-committal title refers to an illustrated article on the economic uses of asbestos as a refractory and insulating medium; and we are informed that "in the middle of the present summer it was discovered that a hill at Tompkinsville, Staten Island, within the city limits of New York, long known as a freak serpentine intrusion bearing asbestos of good fiber, was heavily veined with amphibole asbestos of the actinolite and tremolite varieties. Engineering reports are quoted as showing several million tons, in perpendicular veins running completely through a 150-foot elevation at a distance of only 600 feet from tide water."

It is somewhat surprising and more or less amusing to realize that a publication such as the *Scientific American* could be imposed upon as easily as would be implied by the acceptance of this article; especially as the facts, historical, scientific, and economic, in connection with the Tompkinsville asbestos are so well known and have been the subject of so many descriptions, reports, etc., since the first reference to the subject about a century ago (see *Amer. Jour. Sci.* 1¹: 54, 55. 1818), in a communication from James Pierce to the Editor of the Journal, in which he says: "I forward you specimens of straw and rose-coloured amianthus I recently met with on Staten Island. . . . It breaks up like flax, and may be spun and wove without the aid of moisture . . . etc."

The Johns Co., manufacturers of asbestos goods, mined about seventy or eighty tons on Pavilion and Ward's hill some forty years ago and then abandoned the enterprise, as it was not in sufficient quantity to repay the expense of excavating, although some of the material was of excellent quality, as may be seen by examining the numerous specimens contained in our collections.

It may also be pertinent to recall that on or about August 15, 1919, a certain Ernest E. V. von Brandenburg, better known as "Broughton Brandenburg," was arrested and held on seven indict-

ments, charging grand larceny and conspiracy, for selling stock in an asbestos mine on Staten Island, which he also claimed yielded rubies and emeralds (see *New York Sun*, Aug. 29, 30, 1919). The logical aftermath to the affair is briefly mentioned in the following news item, which appeared in the *New York Sun and Herald*, April 1, 1920:

"Sing Sing Sentence for Brandenburg"

"Writer and Promoter Will Serve 2½ Years"

"Broughton Brandenburg, magazine writer and promoter, was sentenced by Judge Crane in General Sessions yesterday to two and a half years in Sing Sing prison for grand larceny in connection with the sale of stock in a Staten Island 'asbestos' mine promoted a year ago by the New Methods Moulding and Metals Corporation, which Brandenburg organized. He was released on \$7,450 bail pending an appeal.

"Brandenburg was convicted of forgery in 1910, and sentenced to from two to four and a half years in prison. He is 43 years old, and lives at 812 Pine street, Philadelphia. He was once indicted for selling to a New York newspaper an article purporting to be written by Grover Cleveland, but was acquitted of the charge of grand larceny on that occasion."

A. H.

WHEN WHALING FLOURISHED OFF THE ISLAND OF MANHATTAN.

Arthur Hollick. *New York Sun*, Sept. 14, 1919.

This is an article written for the readers of the magazine section of a Sunday paper. It is based upon the recent discovery of bones of whales in the sands of the beaches at Rockaway, Long Island, and Great Kill, Staten Island. Specimens from the latter locality were brought to our museum for identification.

The article is essentially an historical account of the whaling industry as it formerly flourished in this vicinity, with numerous

dates and references to old records, followed by a brief note on an exhibition of old Long Island whaling memorabilia in the museum of the Brooklyn Institute of Arts and Sciences.

A. H.

UNURBANIZED STATEN ISLAND. Not signed. New York Evening Sun, Sept. 29, 1919.

A serio-comic historical sketch of Staten Island by one who was evidently well acquainted with the main facts, from the discovery by Henry Hudson, through the "peach," the "pig," and the "whisky" war to the time when "men like Cornelius Vanderbilt . . . came to the island and did things," ending with a somewhat frivolous sketch of the surficial activities and industries of the present day. The writer makes a curious error in regard to the population of the island when he says "Staten Island's 12,000 people are as anxious to see progress there as were its settlers." Possibly, however, this may be merely a misprint for 112,000.

A. H.

REMINDER OF DRAMATIC EVENT IN STATEN ISLAND HISTORY.

Not signed [Arthur Hollick]. New York Sun, Oct. 5, 1919.

A brief description, with illustration, of the Quarantine graveyard near Silver Lake reservoir, now included in the area acquired by the city for park purposes, with an account of the main facts in connection with the burning of the Quarantine hospital buildings and the abandonment of the site at Tompkinsville, that necessitated the subsequent removal of the bodies from the original burial ground to the present location.

A. H.

BOROUGH OF RICHMOND'S SOLUTION OF HOUSING PROBLEM.

Staten Island, 1920.

A pamphlet issued in the spring of 1920 by the president of the Borough of Richmond, which contains a "Short History of Staten

Island," a statement of the "Staten Island of Today," and twenty-four illustrations, all addressed to the homeseeker with a view to emphasizing the advantage of residence on Staten Island. The illustrations are admirably reproduced, and the text, prepared we understand (though it is unsigned) by James Nolan, chief clerk, Bureau of Buildings, is terse and to the point.

BIRD LORE, vol. XXII, 1920.

The flight of longeared owls in February on Staten Island is noted by J. T. Nichols on p. 165. The Christmas census, taken by Ralph Friedman and Chas. H. Rogers from the ferryboat and in the Moravian Cemetery, is printed on p. 26-27, and similar Christmas reports have been printed in previous years. It is regrettable that the additional report by Carol Stryker, field secretary Staten Island Bird Club, was omitted.

TWENTY-SEVENTH ANNUAL REPORT OF THE STATEN ISLAND
CHAMBER OF COMMERCE, 1921.

This gives in condensed form a review of recent progress, statistics of banks, building loan associations, public utilities, industries, educational, charitable, and religious institutions, civic societies and clubs. The list of clubs and societies, though incomplete, will be especially useful.

MUSEUM BULLETIN, STATEN ISLAND INSTITUTE OF ARTS AND
SCIENCES, vol. I, II, III, 1919-1921.

This bulletin, a continuation of preceding bulletins of Staten Island Association of Arts and Sciences, is issued monthly, except June and July, and records the principal museum activities with occasional short natural history items. Among the items that especially merit notice are: Visit of Dr. Arthur H. Graves, investigating the chestnut blight. Torrey Botanical Club excursion to Arlington. Display of mounted animal heads and exotic birds.

Mimicry exhibit. Educational exhibit in geology. Talks to children by Miss Campbell, Miss Daley, Mr. Burns, Mr. Stryker, Mrs. Clark, Mrs. Skinner. Exhibit of woody fungus. Aviary given by Mrs. Willcox. Visit of Harry B. Shaw, Federal Pathological Inspector. Victory Day exercises, Miss Edith M. Pollard, violinist. War Trophy exhibit. Exhibit of the mineral quartz. Talk on Guatemalan souvenirs, E. Winslow Ames. Netherlands East Indian exhibit. Pink katydid exhibit. Flower show. John J. Crooke Fund, gift of Dr. and Mrs. N. L. Britton. Lusitania Medal, gift of M. E. Stone. Exhibit of Chinese and Japanese art. Loon at South Beach, gift of Lambert O'Neil. Musical recitals, Miss Edith M. Pollard. Sea gulls roosting at Great Kills. George Washington's account book, facsimile given by heirs of D. M. Van Name. Lantern slides given by L. A. Camacho. Protozoa slides made and lecture prepared. Neighbors' Day at Britton Cottage. Snapping turtle given by R. E. Bell, later named Hatchet Face in newspapers. Exhibit of fine arts. Exhibit of medals. Exhibit of community civics. Staten Island orchids. Imported beneficial beetles. "Americanization," playlet given by children. Staten Island Indian Group, made by Mr. Burns. Sail fish, gift of Mr. W. H. Botsford. Ernest Harold Baynes, bird lecture. Second flower show. Tercentenary exhibit. Bromley Atlas, gift of Mr. Catchings. Board of Education lectures. Museum pigeon. Horticultural Society organized. Staten Island industries exhibit. Fish hawk's nest. Motion-picture projector. Horticultural lectures by Ellen Eddy Shaw and Montague Free. Catkins and early spring. Orders of insects exhibit. C. E. Olsen on Marine Life.

NORTH AMERICAN CICADAS, by William T. Davis, Staten Island, N. Y., 1921.

A collection of papers published in the Journal of the New York Entomological Society from 1915 to 1921, with table of contents and index to species, presented to the library by the author.

129 species and varieties, of which 60 are new, are treated in this volume, with a profusion of illustration and distribution data, which reflect Mr. Davis' skill with the camera, for the illustrations are made from his own photographs, and the large size of his cicada collection, from which the distribution data are drawn. The attention that has been paid to the earlier descriptions, not always easy to recognize, is also remarkable, and results for instance in fixing the name of our largest species on Staten Island as *Cicada auletes* Germar.

THE CACTACEAE, DESCRIPTIONS AND ILLUSTRATIONS OF PLANTS OF THE CACTUS FAMILY, by N. L. Britton and J. N. Rose, The Carnegie Institution of Washington, vol. I, 1919, vol. II, 1920.

These two volumes, presented to the library by the authors, include 475 quarto pages, 76 colored plates, and 607 text figures, one of which represents *Opuntia opuntia* in its natural surroundings on Staten Island. It is impossible to conceive of a more complete treatment of the cactus family than has been accomplished in these volumes by our distinguished fellow member.

CATALOGUE OF THE COLEOPTERA OF AMERICA, NORTH OF MEXICO, by Charles W. Leng, published by John D. Sherman, Jr., Mt. Vernon, N. Y., 1920.

In 470 pages this volume, presented to the library by the author, gives the names, synonyms, citations of original descriptions, and localities, among which Staten Island frequently appears, of the 18,547 kinds of beetles known from the region treated. The introduction includes an essay on the classification; a bibliography of taxonomic works on Coleoptera is added; and Prof. H. F. Wickham, of Iowa University, has contributed a catalogue of the North American Coleoptera described as fossils.

C. W. L.

Records of Meetings

CONDENSED REPORT OF INSTITUTE MEETINGS

Oct. 19, 1918.—William T. Davis read a paper on The Cold Winter of 1917-1918 and its Effect on Vegetation on Staten Island. (See p. 49.)

Nov. 16, 1918.—Alanson Skinner spoke on Adventures in Costa Rica, describing his exploration of Indian graves there.

Dec. 21, 1918.—Arthur A. Michell read a paper on Shakespeare's Home and Country, illustrated with lantern slides.

Jan. 18, 1919.—Robert W. Gardner spoke on The Coming of the Cement House.

Feb. 15, 1919.—Charles E. Tefft spoke on What has Malaria to Do with Monuments? At this meeting the death of Dr. John Quincy Adams on February 12 was announced and appropriate resolutions were entered on the minutes.

March 15, 1919.—Arthur Elliott Sproul spoke on Personal Experiences in Russia during the Revolution.

April 19, 1919.—Clinton G. Abbott spoke on Conserving the Natural Resources of New York State, with illustrations by motion pictures.

May 17, 1919.—Annual meeting devoted to election of trustees and consideration of amendments to Constitution and Bylaws.

Oct. 4, 1919.—Special meeting to vote on amendments by which the number of elective trustees was increased to twenty-one.

Oct. 18, 1919.—George L. Mitchill, a member of the American Expeditionary Forces in France, spoke on Aerial Photography.

Nov. 15, 1919.—Dr. Frederic A. Lucas, director of the American Museum of Natural History, spoke on Whales and Whaling, with lantern slide illustration, and received an ovation at the close of a lecture remarkable for the intimate knowledge of the subject it displayed.

Dec. 20, 1919.—William H. Fox, director of the museum of the Brooklyn Institute of Arts and Sciences, spoke on A Visit to the Prado, with many illustrations by lantern slides and photogravures of Spanish art.

Jan. 17, 1920.—James P. Chapin spoke on The Central African Wilderness, describing his adventures during the five years he spent in the Congo region with Herbert Lang, with lantern slide illustrations.

Feb. 21, 1920.—George P. Engelhardt spoke on Dixie Land of the Mormons, describing southwestern Utah, with lantern slide illustrations.

March 20, 1920.—W. L. Calver spoke on Remarkable Discoveries in the Revolutionary Camps of Greater New York, with lantern slide illustrations and particular reference to the old British fort at Richmond.

April 17, 1920.—Clinton G. Abbott spoke on Conserving the Forests. Fish, and Game of New York State, with illustration by motion pictures.

The remarkable collection of Florida shells given by Mrs. North McLean was also shown at this meeting.

May 15, 1920.—Dr. N. L. Britton, director of New York Botanical Garden, spoke on Early Flowering Wild Flowers of Staten Island, with unusual colored lantern slides in part made by Cornelius Van Brunt.

Oct. 16, 1920.—Tercentenary Celebration of Mayflower Compact and First Legislative Assembly at Jamestown, Virginia. Addresses were made by Hon. Howard R. Bayne (printed in this issue, p. 1) and Dr. Edward Hagaman Hall; tableaux were arranged by L. A. Camacho, with music by Miss Edith M. Pollard; the whole program being under the direction of a committee of colonial ancestry, Mrs. T. Livingstone Kennedy chairman.

Nov. 20, 1920.—Charles W. Barnaby spoke on Mongolia and the Mongols, with lantern slide illustrations.

Dec. 18, 1920.—Charles W. Leng spoke on Community Civics, with illustration by diagrams and lantern slides.

Jan. 15, 1921.—J. Blake Hillyer spoke on Physical Training in the Schools of Greater New York.

Feb. 17, 1921.—T. Gilbert Pearson, president of National Association of Audubon Societies, spoke on Bird Life along the Gulf Coast, with lantern slide illustrations.

March 19, 1921.—Dr. Robert T. Morris spoke on Hudson Bay Territory, with lantern slide illustrations.

April 16, 1921.—Dr. J. Chester Bradley, of Cornell University, spoke on Entomological Adventures in South America, referring particularly to the Andes and upper Amazon Valley.

May 21, 1921.—Roy W. Miner, of the American Museum of Natural History, spoke on The Kingdom of the Tides, with lantern slide illustrations and remarkable motion pictures of marine life.

MEETINGS OF THE SECTIONS

SECTION OF HISTORICAL RESEARCH

George W. Tuttle, chairman.

S. McKee Smith, recorder.

This section has held meetings annually in 1919, 1920, 1921, at which the historical papers printed in this volume were presented.

REPORT OF SECTION OF NATURAL SCIENCE

Charles W. Leng, chairman.

Edward J. Burns, recorder.

This section has held meetings annually in 1919, 1920, 1921, at which were presented the natural science papers printed in this volume other than those read before the Nature Study Club.

REPORT OF SECTION OF ART

Following the death of Dr. John Quincy Adams the activities of this section became merged with those of the Art Loan Committee of the Women's Auxiliary.

REPORT OF THE WOMEN'S AUXILIARY

The Women's Auxiliary in its present form (the Art Committee and Hospitality Committee of Women having been previously in existence) was organized April 6, 1919, with Mrs. Charles P. Benedict as president, Mrs. James R. Walsh vice president, Mrs. Adeline T. Hollick secretary. Mrs. Hollick resigned and Mrs. Benedict unfortunately died December 28, 1919. Mrs. Walsh accepted the presidency and Mrs. Vesta Handley Greaves became secretary. The following committees were appointed:

Art Loan Committee, Mrs. Robert W. Gardner, chairman.

Hospitality Committee, Mrs. Charles A. Ingalls, chairman

Flower Show Committee, Mrs. R. L. Stoddard, chairman.

Americanization Committee, Mrs. T. Livingstone Kennedy, chairman.

Children's Work Committee, Mrs. Grace Egbert Clark, chairman.

Membership Committee, Mrs. F. W. Skinner, chairman.

Under the management of the Auxiliary and its committees refreshments have been provided at all Institute and many other meetings held in the Museum; two flower shows have been given, lectures on various subjects have signalized their meetings; the War Trophy Exhibit, the Lace Exhibit, the "Americanization" playlet by children, and Art Loan exhibits have been arranged. Funds have been raised for lantern slides and for Children's Museum League purposes. Lectures at public schools, addresses before other women's societies, and other engagements for the museum staff have been made. The Auxiliary has thus been of material assistance to the trustees in furthering the usefulness of the museum in each of its departments.

REPORTS OF AFFILIATED ORGANIZATIONS

The Board of Trustees have approved the use of the auditorium of the Museum for meetings of organizations with objects kindred to those of the Institute. Of such the following have made more or less detailed reports:

STATEN ISLAND BIRD CLUB

Organized May 22, 1914, under the name of Staten Island Bird Lovers Club, at the residence of Mrs. Wilhelm Knauth, Hon. Howard R. Bayne in the chair, Howard H. Cleaves secretary *pro tem*. Mrs. Knauth was the first president, and the club flourished for several years. It was reorgan-

ized June 16, 1919, with William T. Davis as president, Carol Stryker as field secretary, Charles W. Leng as secretary-treasurer. Monthly bird walks are held on the second Saturday of each month, and indoor meetings as directed by the Executive Committee. The following meetings have been held: Sept. 25, 1919, Business Meeting. Nov. 17, 1919, Edward Avis, In Birdland. Dec. 15, 1919, Business Meeting. Jan. 23, 1920, Herbert K. Job on Protection of Wild Birds and Animals. June 9, 1920, Carol Stryker on How to Know Staten Island Birds. This lecture has been repeated at several public schools. Oct. 7, 1920, Business Meeting. Oct. 23, 1920, Ernest Harold Baynes on Wild Birds and How to Attract Them. Dec. 15, 1920, Business Meeting. March 19, 1921, Business Meeting.

The matters discussed at business meetings have been maintenance of winter feeding stations for birds, illegal shooting, bird study, records, etc.; and recently the erection of a bird club cabin and bird sanctuary in the woods near the Vanderbilt Mausoleum.

The walks have been popular and well attended, and the scientific results have been recorded in the proceedings of the Staten Island Nature Study Club.

The membership of this club is now 227; its present officers are:

President, William T. Davis
 First vice president, Mrs. Henry M. Trench
 Second vice president, Mrs. Louis A. Dreyfus
 Third vice president, Anton W. Hoffmeyer
 Fourth vice president, Mrs. A. M. King
 Secretary-treasurer, Charles W. Leng
 Field secretary, Carol Stryker

HORTICULTURAL SOCIETY OF STATEN ISLAND

Organized Jan. 26, 1921, with Charles P. Benedict as president, Fred. S. Heal secretary. Meetings have been held on the second Wednesday of February, March, April, and May, at which plans for flower shows have been discussed and illustrated lectures given, viz.: March 9, 1921, Montague Free, of Brooklyn Botanical Garden, on Rock Gardens. April 13, 1921, Kenneth Boynton, of New York Botanical Garden, on Perennial Plants. The membership is now 53, and present officers are:

President, Charles P. Benedict
 Vice president, Mrs. E. B. Steinmeyer
 Secretary, Fred. S. Heal
 Chairman Lecture Committee, Frank L. Doty
 Manager Gladiolus Show, J. Mortimer Vanderbilt
 Manager Dahlia Show, Frank L. Doty
 Manager Chrysanthemum Show, John Rader

THE CHILDREN'S MUSEUM LEAGUE

This was organized at a meeting called in October 1919, by Miss A. L. Pollard and Miss Miriam A. Campbell, at which twenty children were present. E. Winslow Ames was elected president, Marjorie Lawson vice president, Douglas Walsh secretary, and Ruth Walsh treasurer. Meetings were held every Wednesday afternoon until the end of June, conducted by the children themselves. At the first annual meeting, in October 1920, Douglas Walsh was elected president, Marian Alden vice president, Maitland Berglund secretary, and Ruth Walsh was reelected treasurer. The meeting day was changed to Friday, and meetings were conducted partly by the children themselves and partly by the museum staff; the latter in the form of lantern slide talks. Mrs. Grace Egbert Clark, Miss Mary Wood Daley, Mrs. F. W. Skinner, Mr. C. E. Olsen, and Mr. Carol Stryker also kindly gave lectures before the league during the season of 1920-21. A Christmas party was given each year and a picnic at the close of the season. At these the staff has had the kind assistance of Mrs. Walsh, Mrs. Greaves, Mrs. Clark, and Mrs. Leng, of the Women's Auxiliary. The membership of the league has been increased to 123. In January 1921, a system of nature study was devised by which those who enter the course receive a certain number of credits for knowledge gained of trees, flowers, insects, birds, mammals, stones, marine life, and Staten Island history. A button with blue ribbon attached is awarded for a specified number of credits, as punched on a card issued to each child, and a silver medal is awarded when the course is completed. This medal is in effect a certificate of elementary knowledge of all branches of nature study and entitles the wearer to membership in the Nature Study Club. During both years outdoor hikes have been held monthly or oftener, as weather permitted, and Saturdays have been devoted to informal talks and museum games for all children who visited the museum on that day and who wished to participate. During 1919 the docent in charge of these hikes and of the Saturday playtime was Miss Miriam A. Campbell, while Miss Gerardine Ogilby has acted in that capacity during 1920.

Annual Reports

(Abridged)

REPORTS OF THE BOARD OF TRUSTEES

May 17, 1919.—The new museum building was completed and payment therefor made by the subscriptions of 126 persons and by loans obtained from William G. Willcox, William T. Davis, and the Corn Exchange Bank.

Dr. John Quincy Adams, chairman of the Finance Committee, died February 12, 1919. The transferral of exhibits and library to the new building was completed during 1918, and the first meeting in the new auditorium was that held on December 21, 1918.

The Women's Auxiliary was organized on April 6, 1919, Mrs. Charles P. Benedict president. Dr. Arthur Hollick resigned as director of the museum; Charles W. Leng, B.S., research associate American Museum of Natural History, was appointed his successor, taking office June 1, 1919.

May 15, 1920.—The loans from William G. Willcox and William T. Davis were canceled by the generosity of these gentlemen; the bank loan was reduced to \$1,600.

The John J. Croke Fund, value \$2,000, was established by gift of Doctor and Mrs. N. L. Britton, to provide for purchase of natural history books.

The Staten Island Bird Club was reorganized.

The Children's Museum League was organized.

Mrs. James R. Walsh became president of the Women's Auxiliary.

May 21, 1921.—The D. M. Van Name Fund, for horticultural purposes, was established by his children.

The Permanent Fund was established by the purchase of Liberty Bonds, value \$2,000.

The Horticultural Society of Staten Island was organized.

An important offer of large mounted animals was declined for lack of space.

THE JOHN J. CROOKE FUND

At a meeting of the Board of Trustees held July 23, 1919, Dr. N. L. Britton read the following letter:

"TO THE TRUSTEES OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES:

"I desire to establish a permanent memorial to the late John J. Croke, who was for many years a resident of Great Kills, Staten Island, an enthusiastic student of the natural sciences, a liberal patron of science, and a distinguished metallurgist and inventor.

"He was my boyhood preceptor. I wish this memorial to take the form of a trust fund to be designated the John J. Crooke Fund, the income only to be used for the purchase of books pertaining to the natural sciences, to be added to the library of the Institute, each book so obtained to be suitably plated showing its accession through the income of this fund.

"I ask if the Trustees will be willing to receive, hold, and administer such a fund? I have in mind at the present time an endowment for this purpose by Mrs. Britton and myself, to yield ninety dollars annually, in the form of two thousand dollars in four and one-half per cent. bonds of the City of New York.

," Yours very truly,

"July 23, 1919.

"N. L. BRITTON."

On motion by Mr. Davis, duly seconded and carried, it was

VOTED, that the Board of Trustees gratefully accept the offer of Doctor Britton, and will cooperate with him in administering the John J. Crooke Fund as suggested by him; and that the President be and is hereby authorized to accept for the Institute a deed of gift in such form as may be agreed upon between Doctor Britton and the President.

At the meeting of the Board of Trustees held October 4, 1919, Dr. Britton delivered to the President the certificate No. 2769v7 of the corporate stock of the City of New York for two thousand dollars (\$2,000) payable in gold coin of the United States on November 1, 1957, with interest at $4\frac{1}{2}$ per cent. per annum from May 1, 1919, payable semi-annually on May 1 and November 1, together with memorandum of cost thereof. This stock is issued in the name of Staten Island Institute of Arts and Sciences; the certificate is dated September 29, 1919. This delivery was made in accordance with the deed of gift dated August 27, 1919, by Dr. Nathaniel Lord Britton and Mrs. Elizabeth Gertrude Britton of the first part and the Staten Island Institute of Arts and Sciences of the second part, of which a copy is inserted in the minutes of the Board of Trustees, page 239, and pursuant to the action of the Board at a meeting held on July 23, 1919, to constitute a trust fund to be held by the Institute, to be designated as the John J. Crooke Fund, the income alone of the fund to be used for the purchase of books, pertaining to the natural sciences, to be added to the library of the aforesaid Staten Island Institute of Arts and Sciences, each book so obtained to contain a suitable book plate showing its accession through the income of the fund.

At the meeting of the Board of Trustees held December 6, 1919, the director submitted a list of books proposed to be purchased from the accrued income, which list was approved by the Board of Trustees, whereupon the first purchase under the operation of the John J. Crooke Fund was made.

REPORTS OF THE TREASURER

MAY 17, 1910

INCOME

Balance last annual report	\$ 2,810.00	
Receipts from dues, gifts, etc.	1,000.00	
Receipts from notes discounted	2,700.00	
	\$ 6,510.00	

OUTLAY

Payments for printing and expenses	\$ 880.00	
Payments on account of new building and notes	9,248.45	10,128.45
Balance on hand		1,335.55
Liabilities \$5,000.		

MAY 25, 1920

INCOME

Balance last annual report	\$ 1,335.55	
Receipts from dues, gifts, etc.	1,800.00	
	\$ 3,135.55	

OUTLAY

Payments for printing and expenses	\$ 772.02	
Payments on account of notes	800.00	1,572.02
Balance on hand		\$ 1,564.50
Plus John J. Crooke Fund		2,000.00
		\$ 3,564.50

Liabilities \$1,000.

(Notes amounting to \$3,500 canceled during the year by Messrs. Wilcox and Davis.)

MAY 21, 1921

INCOME

Balance last annual report	\$ 1,564.50	
Receipts from dues, gifts, etc.	1,350.00	
Receipts from loans	400.00	
	\$ 3,314.50	

OUTLAY

Payments for printing and expenses	\$1,599.07	
Payments for Liberty Bonds	1,713.00	3,312.07
Balance on hand		\$ 180.00
Plus John J. Crooke Fund	2,000.00	
Plus D. M. Van Name Fund	100.00	
Plus Permanent Fund	2,000.00	4,100.00
Total balance on hand		\$ 4,280.00
Liabilities \$1,000.		

ANNUAL REPORTS

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REPORTS OF THE SECRETARY

MAY 17, 1919

Number of functions, meetings, lectures, etc.	33
Number of members	285
Attendance (museum closed part of the year on account of moving)	7,591

MAY 15, 1920

Number of functions, meetings, lectures, etc.	169
Number of members (including affiliated societies) ..	600
Attendance	16,902

MAY 21, 1921

Number of functions, meetings, lectures, etc.	177
Number of members (including affiliated societies) ..	700
Attendance	19,066

LIST OF DONORS TO THE MUSEUM OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCE DURING 1918-1921

Adams, Frank P.	Camacho, L. A.
American Museum of Natural His- tory	Campbell, Miriam A.
Ames, Mrs. Edward W.	Carney, Hortense A.
Ames, E. Winslow, Jr.	Carney, Sydney H., Jr.
Anderson, Arthur	Catchings, Benjamin
Attracta, Sister M.	Chamberlain, K. C.
Avis, Edward	Chapin, James P.
	Children's Museum of Boston
	Clark, G. M.
Bacher, Lenwood	Clark, John M.
Baker, Thomas O.	Cleaves, Howard H.
Baumerth, Leslie	Cooper, Amy S.
Bayne, Howard R.	Crane, A. Loyal
Bell, Ernest L.	Curley, Thomas F.
Bell, L. V.	
Bequaert, Joseph	Daley, Mary Wood
Berry, Harry V.	Davis, William T.
Beyer, Gustav	Delavan, E. C., Jr.
Bolton, Reginald P.	Disosway, Charles N.
Bostwick, C. Livingston	Disosway, Diana A.
Botsford, W. H.	Dow, R. P.
Britton, R. H.	Dowell, Philip
Burns, E. J.	Dreyfus, Mrs. L. A.
Burrowes, Mrs. Wm.	Düring, Charles A. A.
Bush, W. M.	Durkee, Charles D.

- Fadie, John M.
 Ebsery, Anna Frederica
 Eccleston, Eleanor
 Edwards, Stafford C.
 Ellenberg, Fred.
 Ellis, W. J.
 Fischer, Mrs.
 Fleming, W. J.
 Francis, Mary A.
 Freedberg, Jacob
 Gabbert, Cecil
 Gardner, Robert W.
 Garrigan, Charles
 Garvey, Marie
 Geoffrey, O. P.
 Gerst, Abraham
 Goodwin, Charles W.
 Grabe, Gustav
 Graves, A. H.
 Grout, A. J.
 Hatfield, H. E.
 Hall, James S.
 Hall, John
 Hamm, Mrs.
 Hanson, Thomas Justin
 Hanson, Willis T., Jr.
 Harrison, Eliza T.
 Hautmann, John A.
 Helberg, James
 Hesse, Ernest
 Hicks, Mrs. George F.
 Hillyer, J. Blake
 Hine, Charles G.
 Hoffman, Anna M.
 Hoffmeyer, A. W.
 Hollick, Arthur
 Horton, H. C.
 Horowitz, Rose
 Hunter, Mrs. H.
 Hunt, Pearson
 Hunter College, City of New York
 Ingalls, C. A.
 Ingalls, Mrs. C. A.
 Jacobs, George
 Jakubowski, Francis
 Jelliff, Edwin
 Johnston, Mrs. O. T.
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 Kress, Edward
 Lake, Miss Eliza
 Lamb, James
 Lambert, Mrs. Elizabeth
 Lambert, Walter
 Lawson, Marjorie
 Leng, C. W.
 Leng, S. Gertrude
 Lepine, Charles
 Lespinasse, A.
 Lexow, Mrs. L. A.
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 Lucaa, Amelia B.
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 Mayhew, Helen M.
 Mershon, S. L.
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 Murrill, W. A.
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 Nesslinger, K.
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- New York Botanical Garden
 Nicolay, Allan Sloan
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 Ogilby, Gerardine
 O'Neill, Lambert
 Osborn, Henry Fairfield
 Ostrander, Miss G.
 O'Sullivan, Mrs.
 Paulin, L. R. E.
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 Pfaltz, Hilda
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 Roemers, J. W. and Tjalma A.
 Rowland, W. C.
 Saint Mary's, Unit, League of
 Catholic Women
 Samenski, Roman
 Savage, Tillie
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 Schmidt, Mrs. Fedor
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 Sherman, John D., Jr.
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 Simons, Charles Dewar, III
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 Smith, S. McK.
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 Whited, Harold
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The Settlement of Virginia¹

HON. HOWARD RANDOLPH BAYNE

We may well honor the memory of Washington on this, his birthday, by turning from the busy cares of everyday affairs and dwelling a while upon that settlement at Jamestown on May 13, 1607, which developed into the State where he was born and under whose traditions his character was formed.

"The spacious times of Great Elizabeth" had drawn to a close. John Hawkins, the son of a merchant of Plymouth, himself a voyager of some daring, had in successive voyages carried the English flag to the coast of Guiana, to Florida, to the West Indies, and had rendered perhaps his greatest service by introducing to his country that great sea captain, Francis Drake. Drake, in his time, had taught Frenchmen and Spaniards alike to fear an English greeting upon the high seas. He had penetrated the Pacific through the Straits of Magellan, and in spite of the loss of all his consorts had proceeded with his small ship and his eighty men to harry the Spanish settlements on the Pacific coast, and then, turning homeward through the chartless Pacific and around the Cape of Good Hope, had encircled the globe, to the astonishment and

¹ An address at the meeting of the Women's Auxiliary of the Staten Island Institute, February 22, 1922.

admiration of his countrymen. Martin Frobisher had passed away after a brilliant and dashing career as a militant sailor in the service of his beloved England.

The heroic Gilbert had made his last effort to spread the principles of English liberty in the world, perishing at sea with those faithful words upon his lips: "The way to heaven is as near by sea as by land."

No single achievement prepared the way so directly and clearly to the English settlement in the New World as the destruction of the Spanish Armada.

It is difficult for one in this age to imagine the time when England was not a great maritime power. But the fact is nevertheless that when Philip of Spain sailed his Invincible Armada into the English Channel the fleet opposed to him was in no proper sense a navy, but rather a miscellaneous, indiscriminate, and inadequate collection of merchant ships, caravels, and pinnaces, quickly gotten together and manned with a force generally raw, inexperienced, and poorly trained for concerted effective action. But what they lacked in technical naval preparation and precision, in number and size of vessels, they made up in eager united patriotism and public spirit, directed by captains of unequalled valor and skill. As she had no navy, England had of course practically no commerce. Indeed, as late as the reign of Henry VIII, the laws of the nation were so framed as to prevent development in a commercial way. Thus a statute passed in that monarch's time prohibited the giving or receiving of interest for the use of money, and dealing in negotiable instruments was forbidden as immoral and irreligious.

When the supremacy of Spain on the high seas went down with the Invincible Armada, and her prestige as the greatest military power of the world bowed to the legions of William the Silent in the Netherlands, the opportunity of the English came and they were not slow to seize it.

The rise of England's modern navy began at this time. Her merchants with great assurance began to seek commerce in every

port far and near. Her trade grew rapidly, and commercial enterprise and adventure characterized the period. Improvements in the art of printing had greatly facilitated the spread of information, and news of successful voyages into foreign lands gave a zest for similar undertakings on a larger scale. These involved more extensive schemes and heavier expenditures than individuals were able to undertake, and so joint stock companies were formed to which were granted various corporate privileges of an exclusive kind, including the right to trade with foreign people, to discover and settle new territories, and to govern or help to govern colonies so formed. Such were the Muscovy Company, the English East India Company, the Dutch East India Company, the "Fellowship of English Merchants for Discovery of New Trades" and, later on, the London and Plymouth Companies, with which we are more especially concerned.

It was this fine flow of enterprise and adventure that Elizabeth's reign had encouraged, but that her successor contemplated with doubt if not with dismay.

"No sovereign," says a historian of the times, "could have jarred against the conception of an English ruler which had grown up under Plantagenet or Tudor, more than James the First. His big head, his slobbering tongue, his quilted clothes, his rickety legs, stood out in as grotesque a contrast with all that men recalled of Henry or Elizabeth, as his gabble and rhodomontade, his want of personal dignity, his buffoonery, his coarseness of speech, his pedantry, his contemptible cowardice."

But far more objectionable to his English subjects than any crudeness of manner or grotesqueness of personal appearance was James' extravagant estimate of his princely prerogative and his tyrannous opinion of his royal birthright.

Time is not at my disposal to trace the many expeditions that had for their object the founding of English settlements in the New World. The latter part of the sixteenth century was made honorable by the progressive spirit and patriotism of these undertakings, all doomed to failure, but all serving a useful purpose in

preparing the way for the greatest and best success at a later day. Conspicuous among the leaders in these movements were Walter Raleigh, Humphrey Gilbert, Francis Drake, Richard Hakluyt, John White, all names to be ever held in honor by the American people.

Few, perhaps none, of those taking part in these voyages expected to settle down permanently in the new country. The most common intention seems to have been to stay awhile, a year at most, and return with such gold and silver and precious stones as they might be able to accumulate. A purpose could hardly have been expected on the part of individuals to stay longer when one considers the vast distance from home and friends, the perils of ocean travel in those days, the unused climate, and the exposure of life and liberty to the merciless practices of the aborigines or the more savage Spaniard. These temporary and shifting arrangements were no doubt much to the distaste of the great patriotic promoters of the enterprises, but they had to make the best arrangements they could; it was these or none at all. They might have done better if the men that were induced to go were of a sort adapted to the mission upon which they were sent. Unfortunately this was quite uniformly not the case. The men that build up or keep up institutions are those who stick to the task, those whose best interests are bound up in the community of which they are a part, who have accumulated honor and emoluments by their steadfastness, and who have learned incidentally to let well enough alone.

But the movement toward the west, which we are specially studying now, differed in one important respect from those that preceded it. It determined with unflinching earnestness to establish a permanent colony in "Wyangandacoia," as the new English territory was called by Amadas and Barlow, the captains of Raleigh's expedition of 1584, an outlandish name ill-liked by Elizabeth, who fortunately changed it to "Virginia" in her own honor.

According to a letter in cipher from the Spanish Ambassador Zuniga in London to the King of Spain under date of March,

1606, Sir John Popham, Chief Justice of England, was the leader of a project of sending private individuals to people Virginia.

The watchful Spaniard, reporting these occurrences to his royal master, said that Sir John was a very great Puritan and exceedingly desirous, when his attention was called to violation of treaties, "to say that he did it in order to drive out from here thieves and traitors, to be drowned in the sea!" But Sir John said something quite different in the petition which he and his associates were instrumental in presenting to the king for a charter for his new venture. The purpose was, not to "drown thieves and traitors in the sea," but in the devout, loyal, and ample phrases of the time: "to make habitation, plantation, and to deduce a colony of sundry his (majesty's) people into that part of America commonly called Virginia"; "whereas God might be abundantly made known; His name enlarged and honoured; a notable nation made fortunate; and ourselves famous"; "that a plantation should be settled in Virginia for the glorie of God in the propagation of the Gospell of Christ, the conversion of the savages, to the honour of his majesty, by the enlargeinge of his territories and future enrichinge of his kingdome, for which respects many noble and well minded persons were induced to adventure great sums of money to the advancement of soe pious and noble a work."

Sir Fernando Gorges, a member of the first council for Virginia, in his "Briefe Narration of the Originall Undertakings of the Advancement of Plantations into the parts of America," states that when peace was concluded between England and Spain, a great number of English soldiers and seamen were discharged from service, and these being destitute of employment, rather than hire themselves as mercenaries to foreign princes, chose, in the language of the author, "to put in practice the reviving resolution of those free spirits, that rather chose to spend themselves in seeking a new world, than servilely to be hired but as slaughterers in the quarrels of strangers."

Beside this many agricultural laborers had been gradually thrown out of employment by the change from the general tillage of the

soil to the specialty of raising sheep on account of the growing demand for wool and the greater profit in producing it.

We clearly distinguish in studying these times two classes of men participating in the "Western Planting," as it was quaintly called. And these classes may be considered to have been animated by motives quite distinct, quite different, and on our part, at least, not always quite appreciated.

First, there were statesmen and patriots like Popham, the great Bacon, the Earl of Southampton, Sir Thomas Smith, George Abbot, one of the translators of the Bible, Archbishop of Canterbury, Richard Hakluyt, prebendary of Westminster, and Sir Edwin Sandys. None of these, I think, ever set foot in Virginia, but they had more to do with the plantation, in the highest and best sense, than those who under their inspiration and direction actually sailed the seas and landed in person here. These men and their associates were the guiding minds, often concealed and out of sight amid occurrences of vast movement set in motion by themselves, ever with the best and most unselfish designs.

The other class constituted the hardy sailors who loved the romance of adventure and the dangers of the sea, those daring and desperate men whose occupations were gone when came "the piping times of peace," the younger sons of the gentry who had quickly spent their small portion on coming of age, unfit for serious life, but ever ready to draw a sword whether cause be good or bad, the keen and thrifty merchants who saw good bartering ahead; others, nondescript, having no reason to stay at home and some excellent ones for departing, and finally and best of all, those who were prompted by a steady purpose to do honor to God and country and to help themselves and their countrymen to a larger sphere of civil and religious liberty.

The petition for a charter seems to have been so adroitly drawn and tactfully furthered that on April 10, 1606, James I issued the letters patent under which we must date the faint beginnings of free government in the New World. The charter once issued, preparations were rapidly made to send out the colonizers.

The country looked on with interest, but desirable volunteers in sufficient number were slow to join the expedition, and men to make good colonists were difficult to get. But they did the best they could. By December three vessels obtained from the Muscovy Company, the *Sarah Constant* of 100 tons burthen, the *Good-speed* of 40 tons, and the *Discovery* of 20 tons, were manned and weighted with adventurers and supplies, all placed under the control of Captain Christopher Newport, an experienced and faithful mariner.

The poet laureate wafted them a farewell ode. The court, full of business, at last gave the final word to go, and after the last goodbye was said the three little ships weighed anchor and set sail from Blackwall on the Thames.

Perhaps I can give you no better description of the voyage than by adopting the quaint account of it by one of the party, published a few years afterwards.

"On the 19th of December, 1606, we set saile, but by unprosperous winds, were kept six weekes in the sight of England; all which time Maister Hunt, our preacher, was so weake and sicke, that few expected his recoverie. Yet although we were but ten or twelve miles from his habitation (the time we were in the Downes), and notwithstanding the stormie weather nor the scandalous imputations (of some few, little better than atheists, of the greatest ranke amongst us), suggested against him; all this could never force from him so much as a seeming desire to leave the business; but preferred the service of God in so good a voyage, before any affection to contest with his godlesse foes, whose disastrous designs (could they have prevailed) had even then overthrowne the businesse; so many discontents did then arise; had he not, with the water of patience, and his godly exhortations (but chiefly by his true devoted examples) quenched those flames of envie and dissention.

"Wee watred at the Canaries; wee traded with the salvages at Dominica; three weekes we spent in refreshing ourselves amongst these West India Isles; in Gwardalupa we found a bath so hot,

as in it we boiled porck, as well as over the fire. And at the little ile called Monica, we tooke from the bushes with our hands, neare two hogsheads full of birds in three or four houres. In Mevis, Mona, and the Virgin Iles, we spent some time, where with a lothsome beast like a crocadil, called a gwayn, tortoses, pellicans, parrots and fishes we daily feasted.

"Gone from thence in search of Virginia, the company was not a little discomforted, seeing the mariners had three daies passed their reckoning, and found no land; so that Captaine Ratcliffe (captaine of the Pinnace) rather desired to beare up the helme to returne for England, then make further search. But God, the guider of all good actions, forcing them by an extream storme to hul all night, did drive them by His providence to their desired port, beyond all their expectations; for never any of them had seene that coast."

The "extream storme" had brought them north of the locality at which they had expected to land, about Roanoke Island, on the coast of Carolina, into a large open bay, the "Chesepiack," as they got to know it, with the two capes which they named Charles and Henry, after the king's sons.

The first land they made was Cape Henry, where on April 26, 1607, Newport, Gosnold, and Wingfield with thirty others going ashore to refresh themselves, had a reminder of the danger of innocent recreation in such parts, for they were "assaulted by five salvages; who hurt two of the English very dangerously."

True to the strong religious sense that dominated these stalwart men, they erected a "crosse" at Cape Henry. Proceeding on their way, after some reconnoitering in the neighborhood, their next stop was at a point where they were comforted to find a channel of good depth, which has been accordingly known as Point Comfort ever since. Here they met a number of savages who entertained them very kindly. "When we came first a land," says an ancient chronicler, "they made a doleful noise, laying their faces to the ground, scratching the earth with their nailes. We did thinke that they had beene at their idolatry. . . . After they had

feasted us, they showed us, in welcome, their manner of dancing, which was in this fashion. One of the savages standing in the midst singing, beating one hand against another; all the rest dancing about him, shouting, howling and stamping against the ground, with many anticke tricks and faces, making noise like so many wolves or devils."

And so entertained by other tribes, our adventurers proceeded up that noble river which emptied into the bay opposite the entrance.

"The eight day of May," says our author, "we discovered up the river. We landed in the countrey of Apamatica. At our landing, there came many stout and able savages to resist us, with their bowes and arrowes, in a most warlike manner; with the swords at their backes beset with sharpe stones and pieces of yron able to cleave a man in sunder. Amongst the rest one of the chieftest, standing before them crosselegged, with his arrowe readie in his bow in one hand, and taking a pipe of tobacco in the other, with a bold uttering of his speech, demanded of us our being there, willing us to bee gone. Wee made signs of peace; which they perceived in the end, and let us land in quietnesse."

This landing place was on the northwestern end of an island which lies on the north side of James River about thirty-two miles from the mouth. It is about two and one half miles in length and three quarters in breadth. It contains about 1,700 acres of land. The soil is rich and fruitful, with a good deal of marsh.

The members of the council were sworn in and Wingfield was elected president. On account of charges of insubordination or of ambitious purposes, Captain John Smith was not admitted at first as a member of the council. There was some speechmaking and then the work of starting the colony was begun in this fashion, according to another eyewitness:

"Now falleth every man to worke, the Councell contrive the fort, the rest cut downe trees to make place to pitch their tents; some provide clapboard to relade the ships; some make gardens, some nets, etc. The salvages often visited us kindly. The precidents overweening jealousie would admit no exercise at armes or

fortification, but the boughs of trees cast together in the forme of a halfe moone by the extraordinary paines and diligence of Capitaine Kendall."

By June 15 the fort was finished. It was described as "triangle wise, having three bulwarkes at every corner like a halfe moone, and foure or five pieces of artillerie mounted in them."

Of those whose position or occupation was specified by the ancient annalist, beside the six members of the Council and the preacher, 29 are called gentlemen, 4 carpenters, one blacksmith, one barber, two bricklayers, one mason, one tailor, one drummer, twelve laborers, one surgeon, and four boys, making in all with the nondescript 104 persons.

There was a great deal of dissension among the ill-assorted company, which, added to the impracticable scheme of holding everything jointly and nothing in severalty, soon began to bring want and disease. The steady moist heat of a Jamestown summer is trying even to those accustomed to provide against its debilitating effects by proper attention to food and exposure. The adventurers were unused to the hot climate. They paid no heed to danger of overwork or exposure. They suffered greatly from want of proper nourishing food. One of the party describes the situation thus: "There remained neither taverne, beere-house, nor place of reliefe, but the common kettel; . . . That indeede, he [the president of the Council] allowed to be distributed, and that was halfe a pint of wheat and as much barley, boiled with water. for a man a day; and this, having fryed some 26 weeks in the ship's hold, contained as many worms as graines. . . . Our drinke was water. . . . Had we been as free from all sinnes as gluttony and drunkenness, we might have bin canonized for saints."

In a short while, and particularly in August and September, the consequences became fearfully apparent. Nearly every day witnessed a death of one or more from disease or collision with the Indians. Before October, 50 had died. By January 8, 1608, only 38 survived.

Another writer, seeing what he describes, says of this period:

“There were never Englishmen left in a forreigne countrey in such miserie as wee were in this new discovered Virginia. Wee watched every three nights, lying on the bare cold ground, what weather soever came; warded all the next day; which brought our men to bee most feeble wretches. Our food was but a small can of barlie sod in water, to five men a day. Our drinke, cold water taken out of the river; which was, at a floud, verie salt; at a low tide, full of slime and filth; which was the destruction of many of our men.

“Thus we lived for the space of five months in this miserable distresse, not having five able men to man our bulwarkes upon any occasion. If it had not pleased God to have put a terrour in the savage hearts, we had all perished by those wild and cruell pagans, being in that weake estate as we were; our men night and day groaning in every corner of the fort most pittifull to heare. If there were any conscience in men, it would make their harts to bleed to heare the pittifull murmurings and outcries of our sick men without reliefe, every night and day, for the space of sixe weeks; some departing out of the world, many times three or foure in a night; in the morning, their bodies trailed out of their cabines like dogges, to be buried. In this sort, did I see the mortalitie of divers of our people.”

To Smith, more than to anyone else, and next to him, perhaps, to the little Indian princess Pocahontas, the colony of Jamestown owed its preservation. Time fails me to review his services and her acts of mercy and friendship to the suffering planters.

With Captain John Smith we have all been acquainted from our early childhood. We have all loved and lingered over the story of Pocahontas and of the daring deeds, the singular perils, the misfortunes, and successes of the hero indissolubly associated with her. We need not here rehearse the one nor recount the other.

It is not, perhaps, generally known that Pocahontas was first married to a Captain Kocoum, John Rolfe being her second husband. Her name was really Matoaka, though she was also called

Amonate. "Pocahontas" was a nickname, meaning "Little Wanton," given for her lively and frolicsome disposition.

An old writer gives the following quaint little glimpse of her merry and fun-loving nature:

"And therefore would the before remembered Pocahontas, a well featured but wanton young girle, Powhattan's daughter, sometymes resorting to our fort, of the age then of eleven or twelve yeares, get the boyes forth with her into the market place and make them wheele, falling on their heads, turning their heeles upwards, whome she would followe and wheele so herself, naked as she was, all the fort over."

So it was not always gloomy and distressful at Jamestown. There was a little brightness and light and fun when Pocahontas joined the boys in the market place and wheeled all over the fort.

Under Smith's management an appreciable improvement of conditions took place. Confidence began to return to the discouraged settlers; order was restored and the rules of common sense enforced. In the year 1608 only 28 men had died.

When Smith returned to England, in October 1609, times sadly changed. The strong hand of control was removed, and disorder, neglect, and misrule returned. The "Starving Time" followed with all its ghastly sufferings, too horrible to describe here. When Sir Thomas Gates arrived, in May 1610, the colonists had been reduced from nearly 500 in September to about 60 "most miserable, poor creatures." The case was so hopeless that Gates determined to take them all back to England and abandon the colony. On June 7, 1610, they all got aboard and were dropping slowly down the river when they met Lord Delaware, the Governor General of Virginia, appointed under the new charter of May 23, 1609, with a fresh convoy of men and supplies. On June 10 Delaware had them all back at Jamestown again, and after the new governor immediately on landing had had divine services, once more all hands took hold again, never to let go. And so Jamestown was settled at last and Virginia was established forever.

Is it any wonder that a Virginia lad, learning from his mother's lips these stories of Newport and Gosnold, and Smith and Powhatan and Pocahontas, should revere them all his life, should link them with touching memories of his native soil, and should fondly and reverently sing this little song:

The roses nowhere bloom so white
As in Virginia;
The sunshine nowhere shines so bright
As in Virginia;
The birds sing nowhere quite so sweet,
And nowhere hearts so lightly beat,
For heaven and earth both seem to meet,
Down in Virginia.

There nowhere is a land so fair
As in Virginia;
So full of joy and free from care
As in Virginia;
And I believe that Happy Land
The Lord prepared for mortal man
Is built exactly on the plan
Of old Virginia.

The days are never quite so long
As in Virginia;
Nor quite so filled with happy song
As in Virginia;
And when my time has come to die,
Just take me back and let me lie,
Close where the James goes rolling by,
Down in Virginia.

Erect Silky Leather Flower on Staten Island

ARTHUR HOLLICK

In House's Wild Flowers of New York,¹ part 1, on pages 112 and 114, plate 74, may be found a description and colored illustration of *Viorna ochroleuca* (Aiton) Small, the erect silky leather flower, or dwarf clematis, which is of peculiar local interest, not only for the reason that Staten Island now represents the only known locality for the species in New York State, but also for the reason that the specimen from which the illustration was made was specially collected for the purpose on Todt Hill, June 11, 1917, as was mentioned in our Museum Bulletin for July of that year.

It is more or less common locally from southern Pennsylvania to Georgia; but it has not been recorded from anywhere in the intermediate region between the locality farthest north in Pennsylvania and the locality in southern New York, on Staten Island. So far as any records are available the species appears to have been first discovered about 1680, in Virginia, by John Banister, by whom it was catalogued under the descriptive polynomial "*Clem.[atis] erecta, humilis non ramosa, foliis subrotundis, flore unico ochroleuco*";² and the earliest illustrated description of the species, by Plukenet,³ was also, apparently, based upon specimens from Virginia. These figures include one showing a plant in flower and one in fruit, and it is interesting to note that in the latter figure the leaves are depicted as incised, a feature that occurs occasionally in connection with our local plants.

The binomial, *Clematis ochroleuca*, was first applied to the species by Aiton,⁴ in a description of specimens cultivated in the

¹ Wild Flowers of New York, by Homer D. House. Univ. State of N. Y., State Mus. Mem. 15, pt. 1 and 2. Albany 1918.

² Banister, Johannes, in Ray, *Historiæ Plantarum Tomus Secundus*, p. 1926 [erroneously printed "1928"]. London 1688.

³ Plukenet, Leonhard, *Opera*, vol. 3 (Mantissa), p. 51. London 1700. Idem, vol. 4, pl. 379, fig. 4, 5. London 1705.

⁴ Aiton, William, *Hortus Kewensis*, etc., ed. 1, vol. 2, p. 260-261. London 1789.

Royal Botanical Garden at Kew, England, in 1767. These specimens, also, were probably obtained from Virginia, although they were merely recorded as having originated in North America.

The first discovery of the species in New York appears to have been by Caspar Wistar Eddy, in 1806, on Long Island; and it was listed as occurring "in woods about a mile from Brooklyn, Long Island," in a catalogue prepared by a committee of the New York Lyceum of Natural History, consisting of Eddy, D'Jurco Knevals, and John Torrey,⁵ and was subsequently described and figured in Torrey's *Flora of the State of New York*,⁶ the description and figure being evidently based upon a plant from Eddy's locality, as indicated by the following excerpt from the text: "In a small sandy copse about half a mile from the South Ferry, Brooklyn; the only known locality of the plant in the State. It was first detected there by the late Dr. C. W. Eddy, in the year 1806."

All traces of the species were long ago obliterated on Long Island; and Staten Island now represents its only known locality north of southern Pennsylvania.

Exactly when and by whom it was first found on Staten Island does not appear to be definitely recorded. It was credited to "Dr. Allen" [Dr. Timothy F. Allen], in 1867, in Gray's *Manual*; ⁷ and in the herbarium of the New York Botanical Garden are three specimens, labeled respectively "Toad Hill, New Dorp, Staten Island, T. F. Allen" [no date]; "Toad Hill, New Dorp, Staten Island, with Dr. T. F. Allen" [no date, and no name of collector]; "Herbarium of William H. Leggett. Coll. T. F. Allen. Loc. Staten Island, 1864"; but an interesting fact is that it was probably Mr. August R. Grote, at one time a resident of Staten Island, who was the first to discover and identify the plant, locally. This

⁵ A Catalogue of the Plants Growing Spontaneously within Thirty Miles of the City of New York [commonly cited as "Torrey Catalogue"], p. 51. 1819.

⁶ A *Flora of the State of New York, etc.*, by John Torrey. Nat. Hist. New York, pt. 2 Botany, vol. 1, p. 6, pl. 1. Albany 1843.

⁷ *Manual of the Botany of the Northern United States, etc.*, by Asa Gray. Ed. 5, p. 35. 1867.

may be inferred from an item published in the PROCEEDINGS OF THE NATURAL SCIENCE ASSOCIATION OF STATEN ISLAND, volume 1, page 62 (Meeting held February 11, 1888), as follows:

"Mr. Wm. T. Davis read a portion of a letter from Mr. Aug. R. Grote: '. . . In 1856 I found *Clematis ochroleuca* growing on Kellett's Hill, near Egbertville, on the southern slope near the top. My specimens went to the late Hon. Geo. W. Clinton, botanist of Albany.' "

Other local references to the species by Mr. Davis include a note on the discovery, on May 27, 1887, of a colony of about 100 of the plants on a sand dune in the vicinity of Watchogue,⁸ and an appeal for the preservation of the species in the Todt Hill region, in an article on "Local Notes on Vanishing Wild Flowers."⁹

A note may also be found on the discovery of a station for the species in the vicinity of Richmond, in 1890, by Arthur Hollick.¹⁰

Apparently no effort has been made to establish specimens at other stations on Staten Island where they might be perpetuated, although the species is not difficult to transplant and it makes an interesting and unique feature in any garden. Its numbers have been greatly diminished in recent years in the places where it used to grow in abundance, and in a few years hence it will probably be exterminated, as it was on Long Island. However, specimens from Todt Hill have been planted in the New York Botanical Garden and in the Brooklyn Botanic Garden during the past few years, and these plants are all in a flourishing condition, so that the species appears to stand a fair chance of being preserved as an element in the flora of New York through the medium of these institutions, even though it may be exterminated in its native stations.

⁸ Davis, Wm. T., PROC. NAT. SCI. ASSOC. STATEN IS., vol. 1, p. 56, June 11, 1887.

⁹ Idem, vol. 8, p. 29-30, Feb. 8, 1902.

¹⁰ Idem, vol. 2, p. 50, June 12, 1890.

Natural History Records from the Meetings of the Staten Island Nature Club ¹

WILLIAM T. DAVIS

The meeting of June 22, 1921, was held in the woods at the Staten Island Bird Club cabin, from 6 p.m. until dark. Supper was prepared about a campfire.

Dr. E. P. Felt, N. Y. State Entomologist, was present, and he was much interested in the large and showy dragonflies (*Anax longipes* Hagen) inhabiting the Ink-well Pond, near the cabin. In the quiet warm afternoon three males and one female of this species were flying over the pond. At dusk they were still flying about when they could barely be seen, and it was noticed that the female was laying eggs in the masses of *Hypnum* moss which just rose to the surface of the water. One of the males was captured and presented to the State of New York, as this desirable species was lacking in the collection at Albany.

The meeting of September 30, 1921, was held at the residence of the president, Miss Miriam A. Campbell, 275 Watchogue Road, Westerleigh,

Mr. Charles W. Leng told of a meeting held at his home recently between members of the Staten Island Bird Club and a committee from the Northfield Gun and Game Protective Association relative to the cooperation of the two societies in preserving wild life and preventing violations of the game laws on Staten Island.

Mr. Edward J. Burns exhibited the following rare flies: *Cuterebra cuniculi* Clark, Sand's point, Long Island, July 2, 1921; *Paraclius ornatus* Van Duzee, Palisades, N. J., July 5, 1920, and *Mixogaster breviventris* Kahl., Lake Oskawana, N. Y., September 4, 1921.

Mr. Wm. T. Davis showed photographs of an osprey's nest, taken June 24, 1921. The nest was in a lone dead tree near the old British fort beyond Richmond, and near the end of the Fresh

¹ These records have been largely compiled from the minutes of the club. Edward J. Burns secretary.

Kill Bridge. Two of the hawks were sitting on the tree when the nest was first discovered. An osprey's nest near Richmond was mentioned in the MUSEUM BULLETIN OF THE STATEN ISLAND INSTITUTE for March 1921, but the one photographed in June was more recently built. He also reported hearing a Carolina wren calling in the early morning of July 28. The bird was in the block between Hyatt St. and Wall St., St. George. At one time this bird was not uncommon on Staten Island.

Mr. Davis further stated that after a vain search, extending over several years, for the true katydid, *Pterophylla camellifolia* Fabricius, which at one time was very common on Staten Island, a small colony had at last been discovered by Miss Miriam A. Campbell in the mixed growth of white pines and oaks extending along the northerly boundary of the Moravian Cemetery. The insects had been listened to on several occasions during September, and there appeared to be about a dozen males present.

Mr. Davis also showed a specimen of the large and uncommon rabbit botfly, *Cuterebra buccata* Fabricius, taken at Tottenville by himself while in company with Mr. Burns on June 3, 1921.

Dr. Joseph Bequaert spoke of the number of insects present in America introduced from Europe. The small percentage really established here owe their acclimatization to their habits. Species that are highly specialized, like some of the scale parasites, thrive quite well if their hosts are present in abundance, but others whose mode of living is liable to be changed by the different species found here do not multiply so rapidly. The majority of the introductions are accidental, but a few, such as ladybirds and carabid beetles, have been brought in to help fight dangerous pests.

The meeting of October 29, 1921, was held in the Public Museum.

Dr. Joseph Bequaert spoke on "Insects Used as Food," quoting the works of Aristophanes and Alexis to bring out the fact that locusts and the larvae of beetles were greatly esteemed as food by the ancient and highly cultured Greeks, and proceeding from

these remarks to those of Biblical writers, and so on up through human history from the early Egyptians to the people of the present day, showing that insects filled no small place in the diet of man past and present.

Mr. Charles W. Leng recorded a large drift boulder recently uncovered at the corner of Raleigh Ave. and Clove Road, West New Brighton, in a sewer excavation. The exposed part of the rock measured 10 ft. 9 in. by 11 ft. 3 in., and evidently a considerable part of it remained under the surface.

Mr. Edward C. Delavan, Jr., exhibited a copy of a pamphlet recently issued by the committee surveying for the proposed tunnel, containing two pictures taken from aeroplanes. One of these covered St. George and vicinity and the other the salt meadows on the north shore. The value of such pictures in map-making was pointed out by Mr. Burns.

Mr. Wm. T. Davis stated that following the recent cold weather, four species of birds appeared together on the same day in the grounds surrounding his home at St. George. The birds were two brown creepers, several juncos, a hermit thrush, and two olive-backed thrushes. The thrushes stayed during October 26 and 27 and seemed to be attracted particularly by the berries of the numerous matrimony vines growing along a fence. He also referred to the rare fly *Cuterebra buccata* from Staten Island, exhibited at the last meeting, and stated that recently Mr. John W. Angell had given him a female *Cuterebra cuniculi* Clark collected by him in the Clove Valley, Staten Island, in June of this year. He also showed a *Cuterebra fontinella* Clark, collected on Marthas Vineyard, Mass., August 1921, by Mr. Frank Morton Jones, of Wilmington, Delaware.

The meeting of November 26, 1921, was held at the home of Mrs. E. E. Snow and Mrs. E. A. Stott, 78 University Place, Brighton Heights.

Mr. W. Lynn McCracken spoke of the Hawaiian Islands, where he had lived for two years, dealing mainly with the city of Honolulu, the general character of the country, and the native customs.

Mr. Wm. T. Davis exhibited a specimen of *Clematis ochroleuca* Aiton, commonly called "curly-heads," from the Big Hummock, Staten Island, which is about five miles to the westward of the range of hills that form the backbone of the island, and entirely off of the area of serpentine rock. When the plant was discovered on the Big Hummock in May 1887 (see PROC. NAT. SCI. ASSOC. OF S. I. for June 11, 1887), there were about 100 specimens, but owing to destructive fires the number has been reduced to about 20. In the spring of 1920 the locality was almost completely fire swept, but in the spring of 1921 it fared better, and a few of the plants blossomed. The species occurs on Todt Hill on the area of serpentine rock, and at one time had a considerable distribution in localities along the hills from Mersereau's valley to Richmond.

Mr. Davis also exhibited several specimens of *Vaccinium macrocarpon* Aiton, the American cranberry, collected August 1, 1920, not far from the Ultramarine Works, between Kreischerville and Rossville, Staten Island. At that time the vines were bearing a considerable amount of fruit.

Mr. Carol Stryker exhibited the skull of a weasel found by him the previous summer near White's pond, Ocean Terrace. The presence of this animal on Staten Island at this late day was commented upon.

The meeting of December 28, 1921, was held in the Public Museum, St. George.

Dr. Joseph Bequaert spoke of the ants of Staten Island and Long Island, considering the species in their taxonomic order. Special attention was called to those species having peculiar life histories, especially the fungus-growing ant, and slave-making species. Dr. Bequaert's remarks were supplemented by Mr. Davis, who exhibited his collection of local ants, gathered over a number of years and containing a large number of interesting records both for species and localities. (See An Annotated List of the Ants of Staten Island and Long Island, N. Y. *Bulletin of the Brooklyn Entomological Society*, vol. 17, February 1922.)

The meeting of January 28, 1922, was held in the Public Museum.

Mr. Charles W. Leng read a paper on the nonflowering plants of Staten Island, illustrated by blackboard drawings and herbarium specimens. The development of plant life from organisms composed of one cell and difficult to distinguish from animals was traced up through the multifarious and beautiful algae, fungi, and lichens, which have no leaves or roots, the mosses and hepatics with no roots but having leaflike branches, and the ferns and club-mosses with leaves and roots. All of the plants included in these divisions, it was pointed out, were reproduced by spores.

The meeting of February 25, 1922, was held in the Public Museum.

Messrs. R. Edgar Bell and Carol Stryker told of having seen a saw-whet owl a few days previously in a tree on Elizabeth St., West New Brighton. Mr. Stryker reported a redwinged blackbird singing at Richmond on February 22, and showed an example of fasciation in an ailanthus.

Mr. Edward J. Burns spoke of a recent visit to the old British fort near Richmond, reporting its probable destruction by the company excavating sand from the hill.

Mr. John Rader told of seeing pieces of mica schist from a boring made near the water front on Arietta St., Tompkinsville, showing an underlying extension of this rock from Robbins Reef. The borings indicate the rock to be at least twenty feet thick. Mica schist was found near by, at St. George, some years ago, as mentioned in the PROCEEDINGS STATEN IS. ASSOC. ARTS & SCI. for November 1905. It is there stated: "Mr. Davis exhibited rock specimens, and read the following note: Last August it was found necessary to blast the rock under water at the site of the new ferry slip at St. George. Application for specimens was made at the engineer's office, and our fellow member, Mr. Charles E. Trout, kindly furnished those now presented. The rock is a mica schist, like much of that on Manhattan Island. It contains garnets, and in this instance there was encountered a large seam or vein of

quartz." In his *Geology of the City of New York*, 1909, p. 171, Mr. L. P. Gratacap mentions this occurrence of mica schist at St. George and considers its probable extension beneath the island.

Mr. Wm. T. Davis exhibited his collection of the nine species of snakes known to inhabit Staten Island within recent years. The species are as follows: garter, ribbon, water, DeKay's, black, smooth green, ring-necked, milk, and hog-nosed snake. Of these the green snake and the hog-nosed appear to have become extinct, though the latter was not uncommon on the island fifteen or twenty years ago.

The meeting of March 25, 1922, was held in the Public Museum.

Mr. Charles W. Leng reported the record of Carl Tommerbak of *Cicindela repanda* on the warm afternoon of March 6, in Jones' woods, near Brighton Ave. He mentioned the following dates of blossoming for garden flowers: March 12, anemone and crocus; March 15, snowdrops. On March 28 Mr. Leng had taken some of the children visiting the museum to Richmond, where the butterfly *Vanessa antiopa* and the wasp *Polistes pallipes* were observed flying about. This, however, was not an extremely early spring, like that of 1921.

Mr. Wm. T. Davis showed a number of red maple twigs cut off by rabbits and found by him and Mr. Burns on March 5 near Ketchum's mill pond, Richmond. The red maple had been blown down by the wind and the branches thus placed within reach of the rabbits, who had cut them off diagonally with knifelike sharpness.

Mr. R. E. Bell gave an illustrated talk on the Clove Valley and vicinity, using lantern slides he had personally made and colored. He described the nature of the woods and swamps, and dwelt in some length on the advantages of studying in detail the trees, flowers, and birds of a restricted locality. The pictures were viewed with much interest by all; the pictures of birds' nests and young being of particular interest.

The meeting of April 29, 1922, was held in the Public Museum.

Mr. Carol Stryker reported what he had identified as a yellow-crowned night heron near the Bird Club cabin on April 8 and showed a number of photographs taken by Mr. Bell and himself of a redshouldered hawk found disabled. The bird had been fed until it was restored to health.

Mr. Wm. T. Davis stated that April 10, 1922, with a temperature of 84 degrees, was the warmest April 10 in the vicinity of New York City of which the Weather Bureau had any record. On that day he had observed the large dragonfly *Anax junius* on Hyatt St., St. George, and it was also quite common in the Moravian Cemetery and about the Ink-well Pond. In the pond and neighboring swamp he had observed five large painted turtles sunning themselves. He saw no small specimens thus early. In the swamp in front of the Bird Club cabin he had observed with a glass a male Maryland yellowthroat warbler for about a half hour. This is an early record. While he was looking at the warbler a turkey buzzard flew over going in a southerly direction. The latter does not often reach this part of the island, though in recent years it has come frequently to the vicinity of Tottenville.

On the night of April 20-21 it was cold and a pail of water was frozen over on the morning of the 21st. On April 26 apple and other fruit trees were generally in blossom. He considered this spring about a week earlier than usual.

Mr. Davis also stated that he had heard the harsh and discordant squawk of the introduced pheasant, both in Bucks Hollow near Richmond, on April 26, and in the large swamp west of Huguenot Avenue, at Huguenot Park, on April 28.

The presence of the redbacked salamander under the porch of the grocery store owned by Mr. Macdonald, across Wall St. from the Museum, was mentioned by Mr. Davis as an interesting example of how a species may maintain itself for a long time in an isolated locality if left undisturbed.

Mr. Edward J. Burns exhibited a box of Diptera composed of the common flies to be met with in the spring, pointing out their

main characteristics and the fact that nearly all of the species are to be found on the catkins of willow.

Mr. Charles W. Leng spoke of the word "Bedeguar," a name applied to Cynipid galls of *Rhodites*, which occur on the wild rose. The word is of Persian origin and means wind-brought, and brings to mind the fact that roses have long been in cultivation by man in the Orient. The term is, of course, incorrect, as the galls are caused by the little Cynipid wasps and are not brought by the wind.

At the close of the meeting motion pictures showing the structure and workings of the human eye, compared with a camera, and the correction of eye defects by proper lenses, were placed on the screen. The reel was kindly loaned by the American Museum of Natural History.

The meeting of May 25, 1922, was held in the Public Museum.

Mr. Charles W. Leng exhibited a bottle containing a considerable number of blister beetles, *Cantharis nuttalli* Say, collected on the beach at Eltingville, May 21, 1922, by Mr. Clarence Busted. This is an addition to the beetles known from Staten Island. Mr. Leng also exhibited a specimen of *Clematis ochroleuca* found by Miss Katherine Trench on the hill north of Richmond. This is not a new record, the plant having been found there some years ago, but the find is interesting as it indicates the continuance of the plant in that locality.

Miss Miriam A. Campbell gave an interesting talk on her experiences in raising the large Saturnid caterpillars and moths, illustrated by colored lantern slides. The peculiarities of some of the species were pointed out, such as the follow-the-leader habit of the caterpillars of the Io moth. The thrill of expectancy coincident with the hatching of the cocoons was commented upon, for while one might know the species that was to mature, the unexpected could happen, and from the brown cocoon a wonderful variety might appear. Miss Campbell rightly said that such happenings lead, as they should, to a reverence for the natural phenomena of the world about us.

Literature Relating to Staten Island

CITY SURVEYING FOR TITLE EXAMINATION, by Edwin P. Clark, Brooklyn, Title Guarantee & Trust Co., 1921.

The purpose of this brochure of 90 pages is to point out by numerous illustrations and legal citations the difficulty of reconciling the data of old deeds, etc., with the physical conditions found by the surveyor. The varying standards of measurement, the lack of definition of the highways, the errors of former map-makers and surveyors, the variations of the magnetic needle, etc., as affecting the accuracy of the data, are dealt with in detail. Specific references to Staten Island in connection with Philip Welles, E. Duxbury, and "Howards, S. I.," occur on pages 42 and 43. While the bulk of the references do not relate to Staten Island, the subject matter is of the greatest interest to Staten Islanders interested in the interpretation of old documents in historical research as well as in title examination.

M. & M. EXPOSITION 1922 AUSPICES OF THE PORT RICHMOND BOARD OF TRADE.

A pamphlet containing a "Short History of Staten Island," remarkable for the number of errors. The date of Hudson's arrival is given as December 1609, instead of September; the date of the British conquest is given as 1661 instead of 1664; and many other equally glaring errors follow.

WOMEN OF NEW YORK STATE IN THE REVOLUTION, by Amelia Day Campbell, an article in the Quarterly Journal of the New York State Historical Association, July 1922, contains a reference on p. 161 to Margaret Moncrieffe, and p. 167 the following:

"Charity Mersereau, wife of Colonel Jacob Mersereau, both of whom were patriotic residents of Staten Island, even though the island had the reputation of being a 'nest of Tories,' has been made a patron saint of the Charity Mersereau Chapter, the charter members of which are all Mersereau descendants."

THINGS IN NEW YORK AS OLD AS THE GLOBE, by Ernest Jerome.

A series of articles in The Globe and Commercial Advertiser. The Billop House and Perine House are illustrated and several other old houses are described. The author, who obtained his information in part in our library, especially acknowledges the source of his stories.

THE DIPTEROUS GENUS *DOLICHOPUS* LATREILLE IN NO. AMERICA, by M. C. Van Duzee, F. R. Cole, and J. M. Aldrich, U. S. Nat. Mus. Bul. 116, 1921, 304 pages, 16 plates.

In this comprehensive review of a large genus of small, metallic colored, predaceous flies, *Dolichopus burnsi*, a new species, is described from Staten Island and dedicated to Mr. Edward J. Burns of the museum staff. *Dolichopus quadrilamellatus* is redescribed from material in part collected on Staten Island by Mr. William T. Davis. The museum collections also contain specimens of *Dolichopus retinans*, labeled paratype by Mr. Van Duzee, and of nine other species of the genus.

LOCAL FLORA NOTES—STATEN ISLAND, by Arthur Hollick, in Torrey, vol. 22, 1922.

Three pages are devoted to a discussion of the plants of two areas, one the golf links on Todt Hill, the other the filled area near the Arlington station of the Rapid Transit RR. Several introduced species, not heretofore recorded, are mentioned; and the success of some others in becoming permanently established is discussed.

THE MCCREERIAN for September 1921 contains on page 17 a good illustration of the old stone house on the Richmond Road opposite the Moravian Cemetery. The picture is, however, used to illustrate the alleged history of the Billop House at Tottenville, including the often repeated story of the circumnavigation of the island by Billop to settle its disputed ownership. "The Disputed Claim of the Proprietors of East Jersey to Staten Island," by

Edward C. Delavan, Jr., published in these PROCEEDINGS, vol. 3, p. 37-48, shows conclusively that this claim, being still in dispute in 1704, was not settled by Billop.

THE HUGUENOTS IN AMERICA, by the Hon. G. P. Disosway, an essay sixteen pages in length, was printed in 1867 as an appendix to Samuel Smiles' volume on The Huguenots: their settlements, churches and industries in England and Ireland. Reference is briefly made to the preaching of Drisius and to the petition of Dutch and French emigrants in 1661. Owing to the early date at which Mr. Disosway worked some dates are erroneously stated, particularly the dates for Drisius' ministry "continued from 1652 to 1697" which has been copied elsewhere. We now know that Drisius preached in 1663 to the emigrant settlers of 1661 and that he died in 1673. He was then over 70 years old.

MEMOIRS OF A HUGUENOT FAMILY, translated and compiled from the original autobiography of the Rev. James Fontaine by Ann Maury. New York 1872.

This contains an interesting description of Staten Island in 1716. On October 24 Fontaine, being in a "sloop at anchor under Sandy Hook," writes: "Calm weather, but such a fog we could not see half a mile. . . . This fog is occasioned by the burning of the woods, for at this season the inhabitants set the woods on fire, and the Indians also about this time go a fire hunting." On the 25th "about twelve it cleared, so that we could see the land, and we got the boat, and the men landed us in Staten Island. We were obliged to walk about four miles, not being able to hire any horses. This island is mostly high land and rocky, and that part of the land which is good is mixed with small stones. There are some good improvements here; the inhabitants are mostly Dutch; the houses are all built with stone and lime; there are some hedges as in England. The chief increase is wheat and cattle, they breed large horses here. About five of the clock we came to the Ferry between Long Island and Staten Island which is about one mile

broad." On November 10th "at eight in the morning I bought a horse of Mr. Lancaster Sims, and paid him £8 for it [in New York]. . . . At five, we got into the boat again, and with much difficulty crossed to Staten Island, then we mounted our horses and came to one Stuart's, an inn on the road, about seven miles from the ferry, where we supped, and lay all night. Sunday, 11th.—At seven in the morning we set out from Stuart's, and at twelve of the clock, we came to one Colonel Farrier's house, where the ferry is kept, and we got ferried over to Amboy, which is a small village where the Governor hath a house and garden. . . . The wind blew so hard that we could not get our horses ferried over."

The "Colonel Farrier" mentioned is probably an error for Farmer.

HISTORY OF THE HUGUENOT EMIGRATION TO AMERICA, by Charles W. Baird, D.D. New York 1885.

In two volumes of 802 pages this work dealt thirty-seven years ago with settlements in Brazil, Florida, Canada, New Netherland, Antilles, New England, by French Protestants from many provinces. References to Staten Island and to families who came to Staten Island are numerous; and Waldenses are often mentioned.

1: 178. "Others [Walloon] established themselves on Staten Island."

1: 182: "For the most part, they were natives of the northern provinces. Marc du Soisson, Philippe Casier, Francois Dupuis, David de Marest, . . . were from Picardy. Meynard Journeay, Walraven Luten . . . from Flanders." Other names are also given, some who did not come to Staten Island, others like Gédéon Marlet who did, but whose place of birth is not recorded.

1: 184. Waldenses are mentioned as of December 1656, but no individual is named, and a reference is given to N. Y. Col. MSS. XII, fol. 45, p. 8,¹ which shows that South River, not Staten Island, was involved.

¹ N. Y. Col. MSS., vol. XII, fol. 45, p. 8, quoted in Baird 1: 185, and

1: 186. "A number of Waldensian families came over from Holland, several of whom established themselves on Staten Island. Pierre Martin, Gerard Ive, and Juste Grand arrived in August, 1662, on the ship *Fox*; and Jerome Bovie, Pierre Noue, and Pierre Parmentier—all from 'Walslant'—arrived in April, 1663, on the *Spotted Cow*."

In support of a further statement that "it is believed that others of the first settlers of Staten Island were Waldenses," Doctor Baird cites Brodhead, *History of the State of New York* 1: 692, whose sentence reads "Grants of land were presently [1661] made to various persons, among whom were several French Waldenses, and afterwards many Huguenots from Rochelle." Brodhead gives references to Albany Records, Holland Documents, etc. All these references were reëxamined by Mr. A. J. F. Van Laer, State Archivist, at the instance of Mr. E. C. Delavan, Jr., and no reference to Waldenses found therein. Mr. Van Laer's original letter is in the possession of the St. George Branch of the Public Library.

1: 187. Doctor Baird says the Palatinate "offered a refuge to the oppressed Huguenots, and to the Waldenses, driven from their Alpine valleys," and cites David de Marest, Meynard Journeay, Philippe Casier, as among those who thus came to Staten Island from Mannheim, being French Protestants.

1: 201. Here begins the account of those who went first to the Antilles, especially the island of St. Christopher.

checked by Mr. A. J. F. Van Laer, State Archivist. "Alsoo: Naer alle apparentie menichte vande Verdrene Vaudoisen (:die des gewaerschout sullen werden:) hundaerwaerts sullen comen te begeven," "since according to all appearances many of the exiled Waldenses, who will be notified of it, would desire to go there." "That the persons thus designated were Waldenses, and not Walloons, appears further from a subsequent correspondence, vol. XV, fol. 12, p. 3. The directors wrote to Stuyvesant, April 16, 1663, correcting an impression which he had received that another body of 'the oppressed inhabitants of Piedmont' had made request to be brought over to New Netherland." Baird 1: 186 says: "Certain it is, that in the course of the next few years [following 1657] a number of Waldensian families came over from Holland, several of whom established themselves on Staten Island," but offers no proof beyond the paragraph quoted above, which refers to the colony on South River.

1: 211. Among the inhabitants of that island in 1671 were Elie Bonrepos, Jean Le Comte, Etienne Mahault.

1: 231. In November 1686 "fifty or sixty Huguenots from the islands of St. Christopher and Martinique" came to New York.

1: 263. Here begins the history of emigration from La Rochelle about 1685. From this "ancient home of Calvinism" came Jean Collyn (p. 272), Auguste Grasset, whose daughter married Henri de Money (Manee), Etienne Mahault, who died on Staten Island in 1703 (p. 294), René Rezeau, Jean Belleville, Francois Martineau, Jacques Guion, Paul Regrenier (p. 305), and perhaps others.

Doctor Baird's work thus abounds in information of interest to Staten Island, and shows from how many parts of France, Flanders, and the Palatinate came the early French Protestant settlers. That a few of them may have been Waldenses is possibly shown, but that all or even any large part of them were of that sect is certainly not shown or even claimed by him.

C. W. L.

Hartnagel and Bishop's MASTODONS, MAMMOTHS, ETC., OF NEW YORK STATE.¹

The scope of this bulletin is indicated by the title, and the text represents an excellent résumé of all the information relating to the subject that the authors were able to glean from records and through correspondence.

Of special interest to us is the chapter on Records of Mastodon Remains. This chapter is arranged by counties and illustrated by an outline map of the State on which is indicated every locality where Mastodon remains were known or reported to have been

¹ The Mastodons, Mammoths and other | Pleistocene Mammals of New York State | being a descriptive record of all known occurrences | by | C. A. Hartnagel and Sherman C. Bishop. New York State Museum Bulletin No. 241-242, p. 110, pl. 25, Albany, N. Y., January-February 1921. [Imprint 1922. Issued 1923.]

found. On pages 54-56 are references to the two discoveries of Mastodon teeth on Staten Island, originally published in the PROCEEDINGS NAT. SCI. ASSOC. STATEN IS., vol. 4, p. 18 and 32, 1894, and vol. 7, p. 24-25, 1899, and an extended excerpt from a subsequent article by Arthur Hollick, published in the Annals of the New York Academy of Sciences, vol. 14, p. 67-68, 1901, describing the facts in connection with the remains found in a swamp hole in the Moravian Cemetery at New Dorp. These are the only records from Richmond County and we are to be congratulated on having both specimens preserved in our museum collection.

A. H.

Records of Meetings

CONDENSED REPORT OF INSTITUTE MEETINGS

Oct. 15, 1921.—Mr. Robert W. Gardner spoke of his travels in the Deserts of Southern California, with lantern-slide illustrations. He also showed the effect of moisture condensing, as dew and frost, on various objects; and that in snow crystals the hexagonal form always assumed was the only one in which projecting points could be arranged at equal distances from each other and the center.

Nov. 19, 1921.—The Lyric Orchestra, Mr. Leon E. Verry, director, opened the meeting with a program of six orchestral numbers. Mr. Max Thaten, their sponsor, stated their desire to become the musical section of the Institute. Mr. Charles W. Leng, director of the museum, gave its history to date with lantern-slide illustrations. Mr. Edward Avis imitated the songs of birds by whistling, with violin accompaniment, and showed motion pictures of the meeting of the Staten Island Bird Club at the residence of Mrs. Louis A. Dreyfus. This meeting being the fortieth anniversary of our organization, special exhibits were made of some of the scientific work accomplished by our members, viz.:

Dr. N. L. Britton, in Geology, Botany, and Philanthropy.

Mr. Wm. T. Davis, in Natural History, Literature, and Photography.

Dr. Arthur Hollick, in Geology, Botany, and History.

Mr. Edward C. Delavan, Jr., in History of Staten Island.

Mr. Charles W. Leng, in Entomology.

Mr. Louis P. Gratacap, in Mineralogy.

Mr. Alanson Skinner, in Anthropology.

Dr. Philip Dowell, in Botany.

Mr. James P. Chapin, in Zoology.

Hon. Howard R. Bayne, in Political Economy.

Mr. Charles E. Tefft, in Sculpture.

Also the sixteen volumes of PROCEEDINGS and fourteen volumes of BULLETIN, published by the joint efforts of these and other members of the Institute. There was also exhibited at this meeting a miniature historical group representing the "Indian Attack upon Dutch Settlers in 1655" modeled by Mr. Edward J. Burns.

Dec. 17, 1921.—Mr. John Tee-Van described the "Tropical Research Station at Kartabo, British Guiana" with lantern-slide illustrations.

Jan. 21, 1922.—Dr. Joseph Bequaert delivered an address, "Reminiscences of Native Life and Nature Study in Tropical Africa," illustrated by lantern slides.

Feb. 18, 1922.—Mr. Edward J. Burns described his miniature group, "Indian Attack upon Dutch Settlers in 1655." Mr. Gardner spoke of

"Dynamic Symmetry," pointing out the identity of the ratio 1.618 observed in pine cones and other natural objects with that followed in the architecture of the Parthenon and also obtained by the use of whirling squares. Mr. Wm. T. Davis spoke of the abundance of the bagworm, *Thyridopteryx ephemeraformis*, describing its life history; and of a rare dragonfly, collected near the Bird Club cabin. Mr. Carol Stryker, field secretary, Staten Island Bird Club, told of the birds observed during the day and of the "Brigand Steak" on which the party under his guidance had supped. Mr. A. W. Callisen spoke of "Singing Butterflies," as he designated the Camberwell Beauties of southern France, which sometimes make a perceptible sound by rubbing their wing veins together.

March 18, 1922.—Mr. Charles Gilbert Hine read a paper entitled "Legends and Reminiscences of Old Staten Island People and Places." In reference to the old-time plenty of crabs in our salt meadow creeks, the following verses closed his remarks:

All the Kill's a tank,
 And all the little crabs are in the swim there;
 They have their exits and their entrances;
 And one crab in his time lives many parts,
 His acts being five quick changes. At first the "comer,"
 Hustling and scuttering for shallow creeks;
 Then the "shedder" swelling with importance
 So that his well worn, year-old garments quick
 Do burst at every seam; then a "buster"
 Who breaks the prison of his ancient vesture
 Which, sloughed from off his shoulders, he casts aside
 Waiting his subtle transformation. This fourth stage shifts
 Into the "soft" and epicurean stage.
 When with the plump gastronome he meets
 Whose fair round belly with good soft shell lin'd
 Doth argue much content: last scene of all
 That ends this strange eventful history
 Is the "crackler" when with hard'ning shell again he
 Slips in the swirling waters of the Kill
 Sans fear, sans care, sans dread, sans everything.

April 15, 1922.—Mr. James P. Chapin described his recent journey "Across Europe on a Tour of Natural History Museums," with lantern-slide illustrations.

May 20, 1922.—Miss Agnes L. Pollard reported her attendance at the Buffalo meeting of the Museums Association with a synopsis of the proceedings. Mr. Charles W. Leng described his trip in 1912 to Newfoundland and Labrador in company with Mr. George P. Engelhardt, whose lantern slides were used as illustrations.

MEETINGS OF SECTIONS

SECTION OF HISTORICAL RESEARCH

George W. Tuttle, chairman.

S. McKee Smith, recorder.

This section has gained the support of Mr. Royden Woodward Vosburgh, who, with the cooperation of Messrs. Delavan, Davis, and Leng, has made a careful study of the older Staten Island churches.

SECTION OF NATURAL SCIENCE

Charles W. Leng, chairman.

Edward J. Burns, recorder.

The annual meeting was held in conjunction with the meeting of the Nature Club, with which the section is to some extent merged.

REPORT OF WOMEN'S AUXILIARY

Mrs. James R. Walsh, president.

April 29, 1921.—Mrs. Frank W. Skinner, of the Auxiliary, gave the Children's Museum League a lecture on Switzerland, illustrated by lantern slides.

June 10, 1921.—Annual meeting for election of officers.

July 1, 1921.—Exhibit of Old Lace and Fans, under the direction of Miss Anna F. Wood.

Oct. 1 to Nov. 5, 1921.—Loan Exhibit of Paintings and Sculpture.

Nov. 18, 1921.—Mrs. John J. Schoonhoven and Miss Colvin, of the Children's Museum, Brooklyn, spoke of their work there.

Dec. 14, 1921.—Tea at residence of the president of the Auxiliary, Mrs. James R. Walsh. Mrs. Marian K. Gould, in Indian costume, described her work for Indian children.

Jan. 25, 1922.—Dr. G. Clyde Fisher gave his lecture, "John Burroughs and his Favorite Haunts," with lantern-slide illustrations.

Feb. 13, 1922.—Special exhibit of Lincoln relics, including cast of his hand, loaned by Mrs. William G. Willcox.

Feb. 22, 1922.—Hon. Howard R. Bayne delivered an address, "The Settlement of Virginia,"¹ followed by the presentation of the patriotic play, "Mrs. Murray's Dinner Party," directed by Mrs. H. F. De Nyse. A special exhibit of George Washington relics, loaned by Mr. W. Lanier Washington, through Mrs. C. E. Tefft, also by Hon. Howard R. Bayne and Dr. Sydney H. Carney, Jr., was a feature of this occasion.

Mch. 29, 1922.—Dr. John F. Dunne, chairman of the Tree Planting Committee of the Chamber of Commerce, spoke on "Tree Planting."

April 26, 1922.—Mr. Charles W. Leng spoke on "Museum Work for Children."

May 31, 1922.—Annual meeting and election of officers.

¹ Printed in this issue, p. 107.

OPEN HOUSE DAY

On July 9, 1921, a general meeting was held in which the Institute had the cooperation of several societies. The program was as follows:

Children's Museum League

Douglas Walsh, President

Presented at 2 p.m., under the direction of Miss Edith M. Pollard, the musical "Pageant of Summer," with characters by members of the League in appropriate costume.

Women's Auxiliary

Mrs. James R. Walsh, President

Mrs. John H. B. Greaves, Secretary

Received visitors from 3 to 5 p.m.

Horticultural Society of Staten Island

Charles P. Benedict, President

Fred S. Heal, Secretary

Presented a timely exhibit of July flowers, open throughout the afternoon and evening.

Staten Island Bird Club

William T. Davis, President

Charles W. Leng, Secretary

Presented at 8.30 p.m. motion pictures of Staten Island Birds, with explanatory remarks, imitations of bird songs, and violin accompaniments, by Edward Ayis.

Antiquarian Society

Arthur A. Michell, President

Miss Mabel G. Burdick, Secretary

Exhibited photographs, pictures, and relics of Old-time Staten Island, with remarks by Cornelius G. Kolff, Pres. S. I. Historical Society.

Staten Island Post, V. F. W., and James S. Slosson Post, A. L. H.

Joined at 5 p.m. in a display of Post colors and Gold Star Flag.

REPORT OF ART LOAN COMMITTEE

Mrs. Robert W. Gardner, chairman.

May 21 to May 27, 1921.—Loan exhibit of Anna Milo Upjohn pictures of Child Life in Europe, under the auspices of Junior Red Cross, Miss Mary

M. Conway, chairman. This exhibit was seen by classes from P. S. 12, 13, 14, 15, 16, 19, 23, 32, Curtis High School, Staten Island Academy, and many adults.

July 1 to Aug. 1, 1921.—Loan exhibit of Old Lace and Fans, under the direction of Miss Anna F. Wood.

Oct. 1 to Nov. 5, 1921.—Loan exhibit of the work of National Association of Women Painters and Sculptors, selected by Miss M. Elizabeth Price, chairman Interstate Jury. This exhibit opened with a private view and reception on Oct. 1, followed by special inspection by members of the Women's Club on Oct. 6, and by Daughters of the American Revolution on Oct. 27.

April 24 to May 20, 1922.—Third annual exhibit of paintings and sculpture. This exhibit was arranged also in conjunction with the National Association and was made the occasion of a reception each Wednesday evening during its continuance.

REPORT OF HOSPITALITY COMMITTEES

Mrs. Charles A. Ingalls, chairman of the Institute Committee.

Mrs. H. Everett Meets, chairman of the Women's Auxiliary Committee.

These committees, which have been a feature of our organization for many years, have supplied light refreshments at each meeting of the Institute or the Auxiliary and at many meetings of our affiliated societies. Those who have assisted during the year past have been Mrs. Barnaby, Mrs. Craig, Mrs. Franklin, Mrs. Hoffmeyer, Mrs. Ingalls, Mrs. Kraft, Mrs. Leng, Mrs. Meets, Mrs. Mills, Mrs. Rottmann, Miss Roberts, Mrs. Snow, Mrs. Stott, Mrs. Wedemeyer, Mrs. Witte officially, with many more informally aiding them.

REPORTS OF AFFILIATED ORGANIZATIONS STATEN ISLAND BIRD CLUB

William T. Davis, president.

Carol Stryker, field secretary.

Charles W. Leng, secretary-treasurer.

Monthly bird walks, on the second Saturday afternoon of each month, have been more largely attended than ever, as many as 75 having been present at one time.

The annual meeting was held in the Museum June 18, 1921. The president reported that the petition, previously addressed to the Conservation Commission, asking exclusion of Richmond County from the operation of hunting licenses in violation of the ordinance of the City of New York prohibiting the discharge of firearms, should be sent to the Police Department through the National Association of Audubon Societies. Such action was approved and has been carried out; the result has been increased activity on the part of the police. At the same meeting a subscription to the John Burroughs

Memorial Fund as well as the usual subscription to the Audubon Society was approved. Mr. Carol Stryker reported the maintenance of bird feeding stations during the winter. Mr. Edward Avis gave his "Birdland" lecture with whistled imitations of bird songs and violin accompaniments. Mr. Howard H. Cleaves presented motion pictures of wild life in the Adirondacks.

Nov. 5, 1921.—A meeting of the club was held at 132 Howard Avenue, the residence of Mrs. L. A. Dreyfus. The president reported progress in checking illegal shooting; Mr. Rader called attention to the importance of posting private property; Mr. Avis, Hon. Howard R. Bayne, Dr. and Mrs. Schoonhoven, Mrs. Knauth, Miss Theiss, and Mr. Hoffmeyer also spoke. At the conclusion of the meeting motion pictures were obtained of such of its original members as were present, viz.: Mrs. Knauth, Mrs. Dreyfus, Mrs. Witte, Mrs. Hoffmeyer, Miss Theiss, Mr. Davis, Senator Bayne, and Mr. Hoffmeyer.

Jan. 11, 1922.—A business meeting was held in the Museum. Mrs. Edna E. Snow and Miss Miriam A. Campbell spoke of their success in attracting birds about their homes with suet.

May 13, 1922.—Annual meeting with more than 150 persons present. Mr. Avis, assisted by Mrs. F. L. Hillyer, accompanist, and the following children, viz.: Victoria Ellenburg, Richard Leng, Paul Kuhn, and Edith Trapp, entertained the meeting after reelection of following officers:

William T. Davis, president.

Mrs. H. M. Trench, first vice president.

Mrs. L. A. Dreyfus, second vice president.

Anton W. Hoffmeyer, third vice president.

Mrs. A. L. King, fourth vice president.

Carol Stryker, field secretary.

Charles W. Leng, secretary-treasurer.

NATURE CLUB MEETINGS

Miss Miriam A. Campbell, president.

Edward J. Burns, secretary.

A large number of natural history notes were presented, which are reviewed in this issue, p. 123.

CHILDREN'S MUSEUM LEAGUE

Douglas Walsh, president, May to October.

John Hearn, president, October to May.

Ruth Walsh, treasurer, May to October.

Katherine Trench, treasurer, October to May.

Paul Kuhn, secretary, May to October.

Frances Schwab, secretary, October to May.

The activities of the League during the year were concentrated upon the Monday afternoon Stamp Club, under the direction of Mrs. Eva R. Bonney, and the Friday afternoon meetings at which illustrated lectures or educational motion pictures were given.

In May 1921, Mr. C. E. Olsen spoke to the children on "Seashore Life," Mrs. F. W. Skinner on "Switzerland," Master Norman Gardiner on "Staten Island Scenes."

During the summer months, Miss Ogilby, our educational assistant, superintended a bead club on Mondays, a modeling club on Tuesdays, a hike on Wednesdays, a stamp club on Fridays, and a nature study club on Saturdays.

In November 1921, Mrs. Jean Sanders spoke to the children on "Hunting Elephants in India," Master Norman Gardiner on "Alaska," and motion pictures of "Bermuda" were shown.

In December 1921, Mrs. Gould spoke on "Indians," motion pictures of the "West Indies" were shown, and the year closed for the children with a Museum party.

In January 1922, motion pictures were shown twice.

In February 1922, the children's lectures were on Lincoln and Washington.

In March, April, and May 1922, similar activities were continued, members of the staff supplying informal talks when no formal lecture was available, Mrs. Grace Egbert Clark being the general director.

Annual Reports

(Abridged)

REPORT OF THE BOARD OF TRUSTEES

May 20, 1922.—A new section of music, the Lyric Orchestra, formed; 68 new members joined the Institute; 281 functions given, including patriotic, educational, historical, horticultural, artistic, and scientific; 27,203 persons attended these functions, the largest number in the history of the Institute. The only regret is that to accomplish this result, the staff have had to work overtime on 126 occasions; and the result can not be repeated without additional help.

REPORT OF THE TREASURER

MAY 20, 1922

INCOME

Balance last annual report.....	\$ 189.76
Receipts from dues, gifts, etc.....	1,511.41
	\$1,701.17

OUTLAY

Payments for printing and expenses.....	\$946.91	
Payments on account of notes.....	300.00	1,246.91
Balance on hand.....		454.26
Plus John J. Crooke Fund.....		2,120.00
Plus D. M. Van Name Fund.....		99.88
Plus Permanent Fund.....		1,990.40
Total treasury assets.....		\$4,664.54
Liabilities \$1,500.		

LIST OF DONORS TO THE MUSEUM TO MAY 20, 1922

Allen, Frederick I.	Brand, W. L.
Allers, Charles	Brick, S. R.
Attracta, Sister M.	Britton, Dr. Nathaniel L.
Bale, John	Britton, Dr. W. E.
Bayne, Hon. Howard R.	Brooks, Miss Bertha G.

- Burns, Edward J.
 Carney, Dr. Sydney H.
 Champion, F. Beville
 Clark, Mrs. Grace Egbert
 Cleaves, Howard H.
 D. A. R., Richmond County Chapter
 Davis, William T.
 Delavan, Edward C., Jr.
 Deleo, Thomas
 Depew, Hon. Chauncey M.
 Disosway, Charles N.
 Disosway, Miss Diana A.
 Dowell, Dr. Philip
 Dreyfus, Mrs. L. A.
 Drowne, Henry Russell
 Du Bois, Mrs. A. G.
 Ferguson, Robert
 Fish, Fred W.
 Gardner, Robert W.
 Garland Mfg. Co.
 Grover, G. Alvin
 Hagedorn, Alwin
 Hall, John
 Hicks, Edgar
 Hillyer, J. Blake
 Hoffmeyer, Mrs. A. W.
 Hollick, Dr. Arthur
 Holtham, A. E.
 Ingalls, Charles A.
 Jeans, Ernest A. St. Clair
 Jordan, Carroll S.
 Kahn, Charles
 Keeley, John W.
 Keve, J. F.
 Kihn, W. Langdon
 King, Miss Anna
 Kopf, Leon
 Kramer, Albert
 Leach, E. R.
 Leng, C. W.
 Levy, Morris
 Loeffler, Mr. and Miss
- Marra, Tennie
 Meurer, Edward C.
 Michell, Arthur A.
 Miranda, Richard
 Mitchell, William H.
 New York Chamber of Commerce
 Nichol, Harold
 Nichols, Percival K.
 Nordstrom, F.
 Paulin, L. R. E.
 Rader, John
 Radium Luminous Material Corp.
 Rhinelander, T. J. Oakley
 Ripley, Carrie
 Rockstroh, Arthur
 Schneider, William
 Skinner, Alanson
 Slevin, James
 Spratt, T. H.
 Stafford, Laura
 Steinmeyer, Dr. and Mrs. H. G.
 Stone, M. E.
 Taft, Miss Mary A.
 Tefft, Marie B. (Mrs. C. E.)
 Tommerbak, Carl
 Trench, Kathryn
 Tribus, L. L.
 Trowbridge, Francis Bacon
 Tuttle, George W.
 University, State of New York, Division of Archives and History
 Valentine, Audrey
 Van Pelt, Capt. F. V.
 Walsh, Douglas
 Walsh, Mrs. James R.
 Weidmann, Mrs. W. H.
 Whalen, Grover
 Willcox, Mrs. William G.
 Willshaw, Thomas
 Women's Auxiliary
 Yetman, Miss Laura B.
 Zeltner, Ernest T.

Constitution and Bylaws of the Staten Island Institute of Arts and Sciences

CONSTITUTION

ARTICLE I

The provisions of the Act of Incorporation, Chapter 526 of the Laws of 1905 of the State of New York, as amended by Chapter 208 of the Laws of 1910, and Chapter 850 of the Laws of 1911, and Chapter 57 of the Laws of 1918, are adopted and form part of this Constitution.

ARTICLE II

The management of the affairs of the Institute shall be vested in a board of twenty-three trustees, composed of twenty-one members to be elected by the Institute as hereinafter stated, together with the president of the Borough of Richmond and the district superintendent of schools in the Borough for the time being, as ex officio members. A president, first and second vice president, secretary, and treasurer shall be elected by the board at its annual meeting. Any vacancy in any of the offices, or in the board, except in the case of ex officio members, may be filled by the board, and the persons so selected shall serve until their successors are elected. Any trustee absent for three consecutive meetings of the board may, unless an excuse for such absence satisfactory to the board be presented, be declared by the board to have vacated the office of trustee.

ARTICLE III

The Board of Trustees may make such rules and regulations, appoint such committees, and employ such persons as they may deem advisable to aid in the performance of the duties expressed or implied in the Act of Incorporation.

ARTICLE IV

The principal office of the Institute shall be located in the Borough of Richmond, in the City and State of New York.

ARTICLE V

Amendments to this Constitution, not incompatible with the Act of Incorporation, and the acts amendatory thereto, may be made by a vote of two thirds of the members present and qualified to vote at any special meeting of the Institute called for that purpose, or at any regular meeting, on not less than five days' notice of such meeting by mail, sent to each member and including the text of the proposed amendments, provided such proposed amendments shall have been previously submitted in writing and announced at a regular meeting of the Institute.

BYLAWS

I.—MEETINGS

Sec. 1. *Annual Meetings:* The annual meetings of the Institute shall be held on the third Saturday evening of May. Notice of each meeting shall be mailed by the secretary to all members and patrons qualified to vote, not less than five days prior to the date of the meeting, and ten members shall constitute a quorum for the transaction of business.

Sec. 2. *Regular Meetings:* The regular meetings of the Institute shall be held on the third Saturday evening of each month from October to May, inclusive. Not less than three days' notice of each meeting shall be mailed by the secretary to all members. Ten members shall constitute a quorum for the transaction of business, but a quorum for the prosecution of scientific work or for the carrying out of a scientific program shall always be assumed.

Sec. 3. *Special Meetings:* The president may of his own motion, and he shall on the written request of ten or more members qualified to vote, call a special meeting of the Institute. Not less

than five days' notice of the meeting shall be given to all members qualified to vote, and the notice shall include a statement of the purpose for which the meeting is called. At all special meetings ten members shall constitute a quorum for the transaction of business.

II.—ORDER OF BUSINESS,

Sec. 1. *Annual Meeting*: The order of procedure at the annual meeting of the Institute shall be: 1. Reading of Minutes; 2. Annual Report of the Board of Trustees; 3. Election of Trustees for the Ensuing Year; 4. Deferred or New Business; 5. Scientific Program; 6. Adjournment.

Sec. 2. *Regular Meetings*: The order of procedure at the regular meetings of the Institute shall be: 1. Reading of Minutes; 2. Miscellaneous Business; 3. Scientific Program; 4. Adjournment.

Sec. 3. *Special Meetings*: The order of procedure at special meetings of the Institute shall be: 1. Reading of the Notice of the Meeting; 2. Action on the Specified Object of the Meeting; 3. Adjournment.

III.—MEMBERSHIP

Sec. 1. The Institute shall consist of active members, and may also include life members, honorary members, corresponding members, and patrons. Active members, life members, and elected patrons only shall have any rights in the property of the Institute, and they only shall be eligible to any elective office.

Sec. 2. *Active Members*: Active members shall be members of the Corporation and be not less than fifteen years of age. Nominations for active membership shall be made and seconded in writing and the nominees shall be voted for by ballot at any meeting of the Board of Trustees, and three negative votes shall reject. Each active member shall on election pay an entrance fee of three dollars (\$3) if elected previous to the stated meeting of the Board of Trustees in January or one dollar and fifty cents (\$1.50) if

elected at or subsequent to the January meeting and prior to the stated meeting in April, and thereafter annual dues of three dollars (\$3), payable at the beginning of each fiscal year. The entrance fee shall be remitted if members be elected at or subsequent to the stated meeting in April and prior to the annual meeting of the Institute. Active members shall be entitled to vote at all meetings of the Institute; to receive free one copy of each publication issued by the Institute; to have free admission and access to the museum and library of the Institute at all reasonable times, and to have special terms of admission to all lectures or other entertainments given under the auspices of the Institute. Any active member one year in arrears of dues shall be suspended from the privileges of membership until such arrears of dues are paid, and if these are not paid within six months thereafter such member may be dropped from the roll by a majority vote of the trustees present at any meeting of the board.

Sec. 3. *Life Members:* Any active member may become a life member by contributing at one time fifty dollars (\$50) to the general funds of the Institute. Life members shall have all the privileges of active members, and they shall be relieved from the payment of annual dues.

Sec. 4. *Honorary Members:* Honorary members shall be chosen from those persons who have rendered conspicuous service in line with the general purposes of the Institute. They shall be elected by the Board of Trustees, and their number shall be limited to twenty-five. Nominations to honorary membership may be submitted to the Board of Trustees by any member of the Institute at any time.

Sec. 5. *Corresponding Members:* Corresponding members shall be chosen from those persons residing at a distance who are known to be interested in the purposes of the Institute, or who are actively engaged in promoting similar purposes. They shall be elected by the Board of Trustees. Nominations to corresponding membership may be submitted to the Board of Trustees by any member of the Institute at any time.

Sec. 6. *Patrons*: Any person contributing at any one time one hundred dollars (\$100) to the general funds of the Institute, or other property to the value of not less than two hundred dollars (\$200), provided such property be accepted by the Board of Trustees, shall be a patron, and on election by the Board of Trustees shall enjoy all the privileges of life membership. Any active or life member may, upon making such contribution of money or other property, become a patron without thereby forfeiting any of the privileges of such membership.

IV.—OFFICERS

Sec. 1. *President*: It shall be the duty of the president to preside at all meetings of the Board of Trustees and of the Institute and to exercise the customary duties of a presiding officer.

Sec. 2. *Vice Presidents*: It shall be the duty of the first vice president to act as the presiding officer in the absence of the president and to exercise the functions of the office of president at such times as the president may be unable to act. In case of absence or inability to act of the president or first vice president the duties of the president shall be discharged by the second vice president.

Sec. 3. *Secretary*: It shall be the duty of the secretary to call any meeting to order at which the president and vice presidents are absent, to keep the minutes of all meetings of the Institute and of the Board of Trustees, and a corrected list of the names and last known addresses of all the members and patrons of the Institute. He shall notify the trustees of their election to office, and all members and patrons of their election, suspension, and expulsion, and all committees of their appointment. He shall send all notices of meetings to members entitled to receive the same and conduct all official correspondence with them, except such as may pertain to the office of treasurer. He shall have charge of the official records of the Institute, and also of its corporate seal, which he shall affix and attest as directed by the Board of Trustees. He shall render a report at the annual meeting which shall include the number of

members and patrons elected, resigned, deceased, and dropped from the roll during the year; the total membership of the Institute at date; the number of regular and special meetings held and the average attendance at each during the year.

Sec. 4. *Treasurer*: The treasurer shall have charge of all moneys belonging to or under the control of the Institute, and he shall keep and invest the same in such manner as the Board of Trustees may from time to time direct. He shall keep a corrected list of the names and last known addresses of all active and life members and patrons, showing their financial relations with the Institute. He shall notify all members in regard to their dues and receive and account for all dues and contributions to the funds of the Institute and for any income that may accrue from any property owned or controlled by the Institute. He shall pay all debts against the Institute, subject to such rules and resolutions as the Board of Trustees may adopt, and he shall report to the board from time to time, as required, the condition of the finances of the Institute. At the annual meeting he shall render a report showing all receipts and expenditures for the entire year and all assets and liabilities. He shall give a bond in such sum and in such form as the Board of Trustees shall direct.

Sec. 5. *Tenure of Office*: Each officer shall hold office until his successor is elected and has qualified.

V.—BOARD OF TRUSTEES

Sec. 1. *Nominations*: Nominations for election to the Board of Trustees shall be made by a committee of five active members of the Institute appointed by the president, of whom not more than two shall be trustees. Said committee shall be appointed at or previous to the regular meeting of the Institute in April, and at this meeting the names of the members of the committee shall be announced and entered on the minutes. Other nominations may be made by any ten members of the Institute qualified to vote and a list thereof transmitted to the committee on nominations not less than five days prior to the annual meeting of the Institute, accom-

panied by the names of the members making such nominations; and it shall be the duty of the said committee to submit at the annual meeting all nominations so made, together with any made by the committee.

Sec. 2. *Election*: The elective trustees shall be voted for by ballot by members present at the annual meetings of the Institute, or at the next regular meeting following a meeting increasing the number of them, and at each annual meeting the vacancies shall be filled by election for a term of three years; provided, however, that if the number of elective trustees be at any time increased to any number in excess of thirteen the board shall, by lot or ballot, reapportion their respective terms of office so that, as nearly as may be, an equal number of vacancies shall occur at each successive annual meeting of the Institute.

Sec. 3. *Annual Meeting*: The annual meeting of the Board of Trustees shall be held on the first Saturday after the annual meeting of the Institute.

VI.—FISCAL YEAR

The fiscal year shall commence on the day of the annual meeting.

VII.—AMENDMENTS

Amendments or additions to these Bylaws may be made by a majority vote of the members present and qualified to vote at any special meeting of the Institute called for that purpose; or at any regular or annual meeting of the Institute, provided that such amendments or additions shall have been submitted in writing and announced at a previous regular meeting of the Institute.

VIII.—SECTIONS

Any five or more members of the Institute may at any time, with the approval of the Board of Trustees, organize a section for the study or exploitation of special topics within the scope of the Institute. Such sections may hold meetings at their convenience, choose such officers as they may deem necessary, and transact busi-

ness incident to the objects for which they are organized; but they shall incur no expense and assume no responsibility in the name of the Institute except as specifically authorized by the Board of Trustees. Membership in the sections shall be limited to members of the Institute, and any member shall be entitled to membership in any of the sections.

IX.—GENERAL PROVISIONS

All procedure and business of the Institute not fixed by the Constitution or Bylaws shall be determined by the Board of Trustees, and all questions of parliamentary order and procedure not specially provided for in the Bylaws shall be governed by Roberts' Rules of Order.

RULES AND REGULATIONS OF THE BOARD OF TRUSTEES

1. MEETINGS

In addition to the annual meeting of the board in May, as provided for in the Bylaws, stated meetings shall be held on the first Saturday evening in January (unless the first Saturday should fall on January 1, in which case the January meeting shall be held on January 8), April, and October. Special meetings may be called by the president at any time. Not less than two days' notice of each meeting shall be mailed by the secretary to all members of the board.

2. ORDER OF BUSINESS

The order of business at all stated meetings of the board shall be as follows: 1. Reading of Minutes; 2. Report of Treasurer; 3. Report of Secretary; 4. Reports of Committees; 5. Report of Director; 6. Election of Honorary and Corresponding Members and Patrons; 7. Unfinished Business; 8. New Business; 9. Adjournment. At the annual meeting of the board the first order of business shall be the election of officers.

3. STANDING COMMITTEES

Executive Committee: The president, the secretary, and the treasurer of the Institute, together with two other members of the board, shall constitute the executive committee, of which the president and secretary shall respectively be the chairman and the secretary. Three members shall constitute a quorum for the transaction of business. The committee shall have general charge of the affairs of the Institute during the intervals between the meetings of the Board of Trustees. They shall transact such business and execute such orders as the board may refer to them, and they may initiate such other business as they may deem advisable for the welfare of the Institute and report thereon at the next meeting of the board. Any action by the committee not previously authorized by the board shall be deemed to be in force until formally disapproved by resolution of the board; but the committee shall not incur any liability in excess of fifty dollars (\$50) without the sanction of the board.

Auditing Committee: The auditing committee shall consist of two active members of the Institute not members of the Board of Trustees. They shall from time to time examine and verify the books and accounts of the treasurer, especially the annual report of the treasurer, and report thereon to the board.

Publication Committee: The publication committee shall consist of the secretary and two other active members of the Institute. The committee shall have general charge of the editing, printing, and distribution of all publications issued by the Institute. They shall formulate rules for methods of citation, terminology, and nomenclature to be followed in all contributions submitted for publication by the Institute, and determine the size and form of all publications and the style of typography to be used in the printing of the same.

General Provisions: The president shall be a member, ex officio, of all standing committees. Except in the case of ex officio members, the president shall appoint all members of standing com-

mittees and fill all vacancies in the same. All rules formulated by any committee shall be subject to approval or amendment by the Board of Trustees.

4. SPECIAL COMMITTEES

The president shall appoint all members of special committees, unless they are specially appointed by resolution of the Institute or of the Board of Trustees, and fill all vacancies in the same.

5. TREASURER

The treasurer shall render a report at each stated meeting of the board, showing all receipts and disbursements since the previous stated meeting and the balance in hand at date. All bills shall be certified as correct by the officer or committee responsible for the same, and no bill shall be paid except on approval by the chairman of the executive committee, or by the order of the Board of Trustees. All checks issued in payment of debts against the Institute shall be signed by the treasurer and countersigned by the president.

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ARTS AND SCIENCES

VOL. II

JANUARY 1924

PART I

LIST OF THE COLEOPTERA OF STATEN ISLAND,
NEW YORK

CHARLES W. LENG AND WILLIAM T. DAVIS

The authors of this list are native Staten Islanders and have spent many happy days together since 1879 in rambling over the Island and in collecting Coleoptera and other insects. It, however, did not occur to them until recently to make a list of the beetles of the Island, almost too late in fact, as many of the old time captures had been parted with, and the rich woods in which the species once lived have been cut away or burned so often as to permanently destroy the natural conditions. On the other hand there are still a considerable number of species that can be added. The dead or dying timber probably contains species of Scolytidæ that have not been recorded, and there are still other beetles to be found by sifting. Many of the beetles collected years ago bear no date of capture and are simply labeled "S. I.," but where possible the months when the specimens have been taken are recorded in the list. This usually offers a fair criterion as to their relative abundance.

In the early eighties many Coleoptera were collected on the Island, not only by the authors, but by Louis H. Joutel, Martin

L. Linell, C. H. Roberts, John D. Sherman, Jr., and Joseph C. Thompson. More recently specimens have been collected by John W. Angell, Dr. James P. Chapin, Edwin A. Bischoff, Charles Benedict, Edward J. Burns, Howard Notman, John A. Grossbeck, Charles W. Leng, Jr., Alan S. Nicolay, Alanson Skinner, Ernest Shoemaker, Lewis B. Woodruff, Frederick Winters and others. The names of some of these collectors appear throughout the list after the records contributed by them. Mr. Charles Schaeffer has contributed a number of records, and we are also indebted to him for assistance in determining a number of species and for the synonymy in the genus *Donacia*. In *Alcocharinae* the determinations are those of Dr. A. Fenyès.

As a result of this combination of effort, 1600 species are recorded in the present list. A number of varieties are also noted.

Owing to its geographical position Staten Island was included as a locality in the 1910 list of New Jersey Insects, and several species are mentioned there that do not appear in the present list as they were probably misidentified.

The number preceding each name refers to Leng's "Catalogue of the Coleoptera of America, north of Mexico," published in 1920.

FAMILY CICINDELIDÆ

- 39b. *Cicindela formosa* var. *generosa* Dej. Watchogue, Long Neck, Lake's Island and Tottenville, from April to October.
42. *Cicindela purpurea* Oliv. April, June, Aug. and Sept.; principally in the Clove Valley, but not common in recent years. Near Silver Lake, March, 1881, on hill among cedars which have now disappeared.
49. *Cicindela duodecimguttata* Dej. Watchogue and Clove Valley; May, June, Sept. and Oct., especially in moist places.
50. *Cicindela repanda* Dej. April to Oct., and often quite numerous on moist areas.

51. *Cicindela hirticollis* Say. From early spring to late fall along the seashore. A living specimen was found in the sand near Crooke's Point, November 26, 1908, by James P. Chapin.
53. *Cicindela tranquebarica* Hbst. (*vulgaris* Say). Watchogue, April, May, Sept. and Oct. Of recent years it has been found only on a sand dune near the end of Old Place road.
- 68g. *Cicindela scutellaris* Say var. *modesta* Dej. On the sandy areas and dunes along Arthur Kill from Mariners' Harbor to Tottenville; also at Richmond Valley and Woodrow. The insect hibernates in the adult stage and is found most plentifully in late summer and fall; it appears again in the spring, in April.
69. *Cicindela sexguttata* Fab. Found from April to Aug.; often along wood paths and sometimes under the bark of old logs and stumps, especially in early spring. Sometimes in gardens.
74. *Cicindela punctulata* Oliv. June to Sept.; the most common species and sometimes attracted by electric lights. Often seen in gardens, especially on the paths.
101. *Cicindela dorsalis* Say. This used to be a common species on South Beach in July and Aug., but was exterminated about the year 1895. It was very common beyond New Creek where the sand was undisturbed as late as August, 1889. Last record we have is July 28, 1895 (J. D. Sherman, Jr.).
104. *Cicindela marginata* Fab. On several of the mud-flats near the beach at Oakwood, July 14, 1911 (Cleaves), Aug. 1, 19 and 21 (Howard H. Cleaves & Davis).

FAMILY CARABIDÆ

125. *Scaphinotus elevatus* Fab. Used to occur in considerable numbers under stones and logs near Silver Lake. The last record is Clove Valley, July 14, 1889. F. G. Schaupp

also records this and *lecontei* from Staten Island in Bull. Brooklyn Entomological Soc., VI, 1883.

128. *Scaphinotus viduus* Dej. One was found about 1890 near where the brook from the Clove Valley is crossed by Forest Ave., and one some years later near the same locality, on the track of the Castleton Corners trolley, where it had been killed. On November 29, 1923, Edward J. Burns found a female of this fine species under a log, associated with some empty snail shells, in the woods between Bull's Head and New Springville.
162. *Sphæroderus (Cychrus) lecontei* Dej. March, April, May and November; once not uncommon but now very rare. April 16, 1905 (Shoemaker); Jones' woods, Prospect Ave., New Brighton, 1921 (Carl Tommerbak).
171. *Carabus serratus* Say. March, April, June.
172. *Carabus limbatus* Say. March, April, May, June, Aug. Found under electric lights and captured in "molasses traps."
173. *Carabus vinctus* Web. April, May, June. A common species.
175. *Carabus nemoralis* Mull. A recently introduced species. The first record was of an individual found dead on the sidewalk of Henderson Ave., West New Brighton, May 10, 1915. (See PRO. STATEN ISLAND ASS'N OF ARTS AND SCI., vol 5, pp. 92, 93.) It is now common in some parts of the Island.
176. *Calosoma externum* Say. July 9, 1907, under electric light at Egbertville; June 4, 1913, under electric light near St. George (Davis); July 5, 1919, in front of museum building, St. George (E. J. Burns); July 23, 1921, Moravian cemetery.
180. *Calosoma scrutator* Fab. June, July, Aug. Found in trees occasionally. A number of years ago on the 3d of July, while one of the authors was sitting on a piazza in the evening, one of these beetles was seen running

across the floor. After a time it came to a standstill and, lowering its body, beat its antennæ, particularly the left one, rapidly on the boards. This made a whirring noise that could be heard at the distance of several feet. The insect was cautiously approached and carefully watched while it repeated the operation several times.

181. *Calosoma willcoxi* Lec. Ft. Wadsworth, June, 1914, at light (Edw. J. Burns).
182. *Calosoma sycophanta* L. One specimen, 146 Stuyvesant Place, June, 1920. See PRO. STATEN ISLAND INST. ARTS AND SCI., vol. 1, p. 76.
184. *Calosoma sayi* Dej. One specimen taken many years ago.
204. *Calosoma calidum* Fab. April, May, June, Sept. Sometimes attracted by electric lights. March 25, 1919, running in field (R. M. Leng).
233. *Elaphrus ruscarius* Say. Clove Valley, near Richmond and at Richmond Valley. April and May; often found on mud-flats.
246. *Notiophilus æneus* Hbst. April, July.
247. *Notiophilus semistriatus* Say. Near Silver Lake and Mariners' Harbor.
251. *Notiophilus novemstriatus* Say. April, June; near Silver Lake, Nov. 8 (Shoemaker). The species of *Notiophilus* are sometimes found among the decayed leaves in woods.
292. *Nebria pallipes* Say. Not uncommon; Nov. 2, 1909. Recorded from S. I. by F. G. Schaupp, Bull. Brooklyn Ento. Soc., VI, 1883. Lives among loose brookside stones.
302. *Pasimachus sublævis* Beauv. South Beach under logs (Bischoff).
308. *Pasimachus depressus* Fab. Reported from Staten Island in the New Jersey list (1910). No specimens of *Pasimachus* have been found by the authors.
316. *Scarites subterraneus* Fab. A rather common species found from April to Dec.; often in gardens. It feigns death when first disturbed.

324. *Dyschirius nigripes* Lec. Common on mud-flat on edge of salt meadow near Old Town Road, July 19, 1915.
331. *Dyschirius globulosus* Say. April, May, June.
339. *Dyschirius sphaericollis* Say. "This species was found by Mr. J. C. Thompson and myself at South Beach. The rains or possibly an unusually high tide had formed a pool by the roadside with gradually sloping banks, the water being nowhere over a few inches in depth. In these banks the insects were living and by pouring water over them, causing a miniature deluge in their homes, they were persuaded to come out and be caught." C. W. L. in PRO. NAT. SCI. ASS'N OF S. I., vol. 2, p. 60; Sept., 1890. Also found in June.
342. *Dyschirius erythrocerus* Lec. On mud-flat on edge of salt meadow near Old Town Road, July 19, 1915.
359. *Clivina impressifrons* Lec. June (Thompson), and July 8, 1912, at light.
366. *Clivina rufa* Lec. ? May 22.
369. *Clivina americana* Dej. One specimen taken in May under the stones on edge of brook, PRO. NAT. SCI. ASS'N OF S. I., vol 1, p. 10; June, 1884.
372. *Clivina striatopunctata* Dej. In mud along salt water creeks; April.
375. *Clivina bipustulata* Fab. May and July; under light. April 23 found in spading up soil in garden, acting like a small *Scarites*.
385. *Schizogenius ferrugineus* Putz. "Staten Island, under logs at South Beach" (Bischoff), New Jersey list, 1910. Seashore, May 17, 1911. The numerous and closely allied species are mostly found among stones at margin of streams and ponds.
432. *Bembidion americanum* Dej. May, June, Aug. Clove Valley, Sept. 10, 1911, on mud flat due to draining a pond. and flying when approached. Active on overcast day.
512. *Bembidion nigrum* Say. April, May, June, July, Sept.

588. *Bembidion tetracolum* Say. Feb. (Thompson), April, May, Nov.
660. *Bembidion variegatum* Say. March, April, May, Sept.
680. *Bembidion graciliforme* Hayw. April.
694. *Bembidion contractum* Lec. April, May, June, Nov.
Salt meadow and seashore.
695. *Bembidion constrictum* Lec. Tottenville, June.
705. *Bembidion affine* Say. May; South Shore, July; Long Neck, Sept.
723. *Bembidion versicolor* Lec. May, June.
737. *Bembidion quadrimaculatum* Linn. April, May, June.
Frequently found in gardens.
792. *Pericompsus ephippiatus* Say.
805. *Tachyura incurva* Say. March, April, May, June.
811. *Tachyura granaria* Dej. March.
819. *Tachyura xanthopus* Dej. July (C. W. L., Jr.).
829. *Tachyura tripunctata* Say. Nov. 6, 1909, on salt meadow.
834. *Tachyura ferrugineus* Dej. April 22, 1905. April 12, 1908 (Shoemaker).
851. *Tachys scitulus* Lec. Staten Island (Thompson).
857. *Tachys coruscus* Lec. April 23, 1904 (Shoemaker).
883. *Tachys lævus* Say. March, April.
892. *Tachyta inornata* Say. Under bark of dead trees. April, May, June.
898. *Tachymenis flavicauda* Say. March, April, May, June, Sept. Common under bark of trees.
901. *Patrobus longicornis* Say. April, June, Sept., Nov.
929. *Myas coracinus* Say. One collected near Egbertville in 1901 (Dr. Edwin C. Van Dyke); Silver Lake, Sept. (Schaeffer); also one without date.
1006. *Pterostichus adoxus* Say. April, Aug.
1089. *Euferonia stygica* Say. Feb., March. Watchogue, Aug., Sept.
1100. *Refonia mæsta* Say. Erroneously recorded as *Pter. su-*

- percilius* from Bloodroot Valley, in Bull. Brooklyn Ento. Soc., VII, 1884, p. 77, by C. W. L.
1161. *Pæcilus chalcites* Say. April, May, June, July, Aug., Sept.
1162. *Pæcilus lucublandus* Say. April, May, June, Aug., Sept.
1165. *Lophoglossus gravis* Lec. Watchogue, edge of salt meadow.
1167. *Lophoglossus tartaricus* Say.
1175. *Omascus luctuosus* Dej. November.
1176. *Omascus corvinus* Dej. March, April, June, Oct., Nov.
1178. *Dysidius mutus* Say. March, April, May, July, Aug., Nov.
1181. *Pseudargutor erythropus* Dej. March, April, June, Sept.
1182. *Micromasculus patruelis* Dej. Four Corners, February 22, 1913; Nov. 23, April 10, 1904 (Shoemaker).
1214. *Loxandrus erraticus* Dej.? Feb. 20.
1259. *Curtonotus pennsylvanicus* Hayw. Tottenville, Sept.
1262. *Leiocnemis avida* Say. March 27, June; seashore and salt meadow.
1265. *Bradytus exaratus* Dej. Tottenville, June 14, Sept. 9.
1267. *Bradytus apricarius* Payk. May.
1281. *Percosia obesa* Say. St. George, Nov. 11.
1285. *Celia patruelis* Dej.
1309. *Celia remotestriata* Dej. Salt meadows, Oakwood, Nov. 21, 1909.
1319. *Celia chalcona* Dej. Feb. Seashore, Sept.
1350. *Celia subænea* Lec. Beach near Oakwood, Sept. 14.
1372. *Celia musculus* Say.
1378. *Celia rubrica* Hald.
1385. *Amara impuncticollis* Say. February to Sept., inclusive.
1400. *Amara cupreolata* Putz. May, Aug.
1423. *Amara crassispina* Lec. March 23, 1907 (Woodruff).
1433. *Triana angustata* Say. March, April, May, June, July; often common in gardens; found when weeding, etc.
1442. *Rembus laticollis* Lec.

1443. *Rembus impressicollis* Dej. May.
1454. *Dicælus purpuratus* Bon. One specimen taken under stone at Dongan Hills, many years ago (A. C. Weeks).
1465. *Dicælus elongatus* Bon. March, April, May, June, Aug.; Richmond, Aug., 1912.
1468. *Dicælus politus* Dej. April.
1470. *Badister notatus* Hald. June, rare, F. G. Schaupp, Bull. Brooklyn Ento. Soc., VI, 1883.
1471. *Badister pulchellus* Lec. "Staten Island, May" (Chittenden), New Jersey list, 1910. May (Thompson).
1482. *Calathus gregarius* Dej. June.
1489. *Pristodactyla impunctata* Say. Clove Valley, August.
1508. *Platynus angustatus* Dej.
1514. *Platynus sinuatus* Dej. Feb., March, April, May, July, Aug., Nov.
1519. *Platynus reflexus* Lec. March, May, June, Aug., Sept., Nov., Dec.
1522. *Platynus extensicollis* Say. Common along streams.
1523. *Platynus decorus* Say. March, Oct.; Ward's Point, June 5, 1914, in wash up. May (Shoemaker). Electric light, May 24 (Woodruff).
1541. *Platynus mutatus* G. & H. May.
1542. *Platynus melanarius* Dej. April, May, September.
1548. *Platynus corvus* Lec. No date. (Det. by Notman.)
1553. *Platynus cupripennis* Say. May, August.
1555. *Platynus excavatus* Dej. May.
1556. *Platynus ferreus* Hald. March, April, May, June.
1558. *Platynus nutans* Say. May.
1566. *Platynus octopunctatus* Fab. Watchogue, June.
1567. *Platynus placidus* Say. April, May, July, Aug., Oct.
1573. *Platynus bogemanni* Gyll. Tottenville, June.
1577. *Platynus æruginosus* Dej. July 8, 1912.
1579. *Platynus crenistriatus* Lec. Nov., Dec. Tottenville, Sept.; July 10 (Shoemaker).
1580. *Platynus rubripes* Zimm. April, May, Dec.

1581. *Platynus punctiformis* Say. April, May, Dec.
1584. *Platynus ruficornis* Lec. March, May, June.
1587. *Platynus picipennis* Kirby. June, August.
1592. *Platynus obscurus* Hbst. (*pusillus* Lec.).
1610. *Leptotrachelus dorsalis* Fab. Flew to light. Said to hibernate in cat-tails.
1612. *Casnomia pennsylvanica* Linn. May, June, Sept.
1616. *Galerita janus* Fab. Feb., April, May, July, Aug. Flew to light, July 8. The larvæ, occasionally seen under stones, etc., are conspicuously colored and have long anal cerci.
1620. *Galerita bicolor* Dru. April, May, June, July, Aug., Sept.
The Lebiini (1641–1753) frequent plants and many are brightly colored.
1641. *Lebia grandis* Hentz. Jan., Feb., March, April, May, Aug., Sept., Nov., Dec.
1642. *Lebia atriventris* Say. Jan., April, May, June, July, Sept.
1643. *Lebia tricolor* Say. One specimen, found many years ago.
1649. *Lebia pulchella* Dej. April.
1655. *Lebia viridis* Say. May, June, July, Aug., September.
1658. *Lebia pumila* Dej.
1659. *Lebia pleuritica* Lec. April.
1667. *Lebia ornata* Say. To be found in summer quite generally; Sept.
1672. *Lebia fuscata* Dej. April, June, Clove Valley.
1675. *Lebia scapularis* Dej. June. Watchogue, Aug. 24.
1682. *Lebia pectita* Horn. Aug. Seashore, June.
1688. *Coptodera ærata* Dej. June.
1691. *Dromius piceus* Dej. July.
1693. *Apristus cordicollis* Lec. May.
1694. *Apristus subsulcatus* Dej. Old Place, August.
1699. *Metabletus americanus* Dej. March, May.
1710. *Calleida punctata* Lec. June 27. Watchogue, July 18.
1723. *Plochionus timidus* Hald. May.

1725. *Pinacodera limbata* Dej. March, April, May, June, Dec.
1726. *Pinacodera platicollis* Say. March, April, June, October.
Var. *fuscata* Dej. April (Shoemaker).
1746. *Cymindis pilosa* Say. June 22; also in Bloodroot Valley.
1748. *Cymindis neglecta* Hald. Bloodroot Valley.
1752. *Cymindis americana* Dej. April; Clove Valley and Bloodroot Valley. See Bull. Br. Ento. Soc., VII, 1884, p. 77.
1753. *Apenes lucidula* Dej. Clove Valley, April. Seashore, June.
- 1776a. *Brachinus perplexus* Dej. May, June.
1789. *Brachinus fumans* Fab. April, May, June.
1799. *Brachinus rejectus* Lec. Clove Valley, May.
1806. *Chlœnius tomentosus* Say. April, May, September.
1814. *Chlœnius impunctifrons* Say. May, June.
1817. *Chlœnius pennsylvanicus* Say. May, June.
1821. *Chlœnius tricolor* Dej. Feb., March, April, May, Oct.
1822. *Chlœnius nemoralis* Say.
1838. *Chlœnius astivus* Say. April, May, June, July, Aug.
1842. *Chlœnius laticollis* Say. South shore, April (C. L. Polard).
1846. *Chlœnius sericeus* Forst. April to Oct. inclusive.
1856. *Anomoglossus emarginatus* Say. April.
1858. *Anomoglossus pusillus* Say. March, May, Oct., Nov.
1860. *Brachylobus lithophilus* Say.
1867. *Oodes amaroides* Dej. Silver Lake; Tottenville, June 4, 1912.
1878. *Geopinus incrassatus* Dej. Woodrow, June, 1907. Burrows in sand to the depth of about six inches.
1896. *Harpalus caliginosus* Fab. May, June, July, Aug., Sept. Eating dead caterpillar in the road, Sept., 1919.
1897. *Harpalus erraticus* Say. August, seashore.
1903. *Harpalus viridiœneus* Beauv. Feb., April, May, June, July, Aug.
1907. *Harpalus vagans* Lec. May, July.
1910. *Harpalus erythropus* Dej. Aug., October.

1920. *Harpalus longicollis* Lec. July, Aug., October.
 1922. *Harpalus faunus* Say. July, September.
 1925. *Harpalus pennsylvanicus* DeGeer. May, June, July, Aug., Sept., Oct., Nov.
 1944. *Harpalus pleuriticus* Kirby. April, May.
 1956. *Harpalus herbivagus* Say. Feb., March, May.
 2007. *Harpalus spadiceus* Dej. April.
 2009. *Harpalus vulpeculus* Say. March.
 2010. *Harpalus dichrous* Dej. June, Aug., September.
 2013. *Selenophorus opalinus* Lec. April, June, July.
 2026. *Selenophorus ellipticus* Dej. September.
 2039. *Selenophorus pedicularius* Dej. South Shore, June 5, 1892.
 2051. *Gynandropus hylacis* Say. Feb., March, July. Sometimes comes to light.
 2070. *Triplectrus carbonarius* Say. April 19, 1889.
 2071. *Triplectrus rusticus* Say. March to Sept. inclusive.
 2087. *Anisodactylus harrisii* Lec. April.
 2088. *Anisodactylus nigerrimus* Dej. April, May, Nov. April 4, sifting leaves in garden.
 2090. *Anisodactylus nigrita* Dej. April, May, June.
 2110. *Xestonotus lugubris* Dej. May.
 2111. *Amphasia interstitialis* Say. Feb., April, May, July, Nov.
 2112. *Pseudamphasia sericea* Harr. May, June.
 2126. *Anadaptus discoideus* Dej. May.
 2127. *Anadaptus baltimorensis* Say. April, May, June.
 2132. *Anisotarsus sayi* Blatchley.
 2139. *Anisotarsus terminatus* Say. July 8 and 9 at light; Aug.
 2156. *Episcopellus autumnalis* Say. Tottenville, May.
 2159. *Triliarthrus badiipennis* Hald. May, August.
 2171. *Stenocellus rupestris* Say. Feb., March, April, May; Nov. 26, on salt meadow.
 2195. *Stenocellus tantillus* Chd. Border of salt meadow at Oakwood, March 18, 1894.
 2211. *Acupalpus hydropicus* Lec. Salt meadow, Feb., April (Shoemaker).

2213. *Acupalpus carus* Lec. February, October.
 2216. *Stenolophus carbonarius* Dej. April.
 2218. *Stenolophus ochropezus* Say. Feb., May, June, Aug.,
 Nov., Dec.
 2220. *Stenolophus fuliginosus* Dej. April, February.
 2234. *Stenolophus plebejus* Dej. February 22, 1913 (Wood-
 ruff).
 2238. *Stenolophus conjunctus* Say. Feb., March, April, May,
 Oct. Seashore, June.
 2249. *Tachistodes partiarius* Say. April 4, sifting; Clove Val-
 ley, June 26; May 8, salt meadow.
 2256. *Agonoderus pallipes* Fab. April, May, June, July. Many
 flying in warm sun, April 28, 1888.
 2261. *Agonoderus comma* Fab. April, June (Notman det.).

FAMILY OMOPHRONIDÆ

2284. *Omophron americanum* Dej. Castleton Corners, May,
 June, Aug.; Clove Valley, June. See Proceedings Nat-
 ural Science Association of Staten Island, vol. 1, p. 10,
 and vol. 1, p. 16. Occurs on the shore of ponds and
 brooks, hiding by day in the sand.
 2287. *Omophron tessellatum* Say. One record near South
 Beach in a bank by a pool. Rossville, Nov. 12, 1917
 (Dr. Wm. H. Wiegmann).

FAMILY HALIPLIDÆ

Often found on filamentous algæ on which the larvæ feed,
 clinging to the slender stems by specially constructed claws.

2299. *Haliphus fasciatus* Aubé. May, Aug., Sept.
 2317. *Haliphus borealis* Lec. Oct. 9, 1915.
 2318. *Haliphus ruficollis* DeGeer. April, Sept., October.
 2319. *Haliphus blanchardi* Roberts. "Staten Island, N. Y."
 (Roberts).
 2328. *Peltodytes muticus* Lec. September (Sherman).

2331. *Peltodytes shermani* Roberts. "Male and female types from Staten Island, N. Y., in my collection" (Roberts). Journal N. Y. Ento. Soc., vol. XXI, p. 117, June, 1913. July 15 (Sherman).
2335. *Peltodytes lengi* Roberts. Type from Staten Island (Roberts). South Shore (J. W. Angell).
2336. *Peltodytes duodecimpunctatus* Say. April, May 20; Sept. 8 and 15 (Sherman).
2337. *Peltodytes edentulus* Lec. South Shore (J. W. Angell).

FAMILY DYTISCIDÆ

2340. *Canthydrus puncticollis* Cr. May.
2346. *Hydrocanthus iricolor* Say. April, May, June, Aug., Sept.; Clove Valley.
2351. *Laccophilus maculosus* Germ. March, April, May, June.
2353. *Laccophilus proximus* Say. Jan., April, Sept., Nov.
2359. *Laccophilus fasciatus* Aubé. May, July.
2363. *Laccophilus undatus* Aubé. April, May, June, Aug., Oct.; Clove Valley.
2367. *Hydrovatus cuspidatus* Germ. April, May, Aug., Sept. Border of salt meadow at Oakwood, March 18, 1894.
2374. *Desmopachria convexa* Aubé. May, August.
2385. *Bidessus flavicollis* Lec. Britton's Upper Pond, Clove Valley, September 8 (Sherman).
2388. *Bidessus pulicarius* Aubé. May, July (Sherman).
2390. *Bidessus affinis* Say. July, September.
2394. *Bidessus lacustris* Say. June, August.
2395. *Bidessus fuscatus* Cr. May, July, Aug. (Sherman). In woodland pools.
2398. *Bidessus granarius* Aubé. May, July, Aug., Nov.
2399. *Bidessus suburbanus* Fall.
2400. *Celina angustata* Aubé. May, July. "... occurs in some ponds on Staten Island where there is some iron in the water . . . but usually if the percentage of iron is great there are no beetles," John D. Sherman, Jr., Journal N. Y. Ento. Soc., vol. XXI, p. 45, March, 1913.

2403. *Cælambus inæqualis* Fab. (*punctatus* Say). April, May, Aug., Sept., Oct.
2408. *Cælambus turbidus* Lec. Sept. Also reported by Linell, PRO. NAT. SCI. ASS'N OF S. I., vol. 1, p. 70, June, 1888.
2420. *Cælambus nubilus* Lec. January, October.
2424. *Cælambus impressopunctatus* Sch. March, April, July.
 "... taken on the salt marshes of Staten Island, but this is a widely distributed species in the north, occurring both at sea level and at high altitudes, both east and west." John D. Sherman, Jr., Journal N. Y. Ento. Soc., vol. XXI, p. 45, March, 1913.
2425. *Cælambus laccophilinus* Lec. July, Aug. (Sherman). In woodland pools.
2429. *Deronectes catascopium* Say. May, October.
2440. *Hydroporus pulcher* Lec. July, Aug. (Sherman). Dongan Hills in running water. September.
2442. *Hydroporus shermani* Fall.
2444. *Hydroporus mellitus* Lec. Dongan Hills, August (Sherman).
2447. *Hydroporus undulatus* Say. February, April, June, July, Aug., Sept., Oct. Climbing up on stem of bush and sunning themselves, February 12, 1903.
2449. *Hydroporus lobatus* Sharp. May, July, Aug. (Sherman).
2452. *Hydroporus clypealis* Sharp. July, Aug., Sept. (Sherman); October (Shoemaker).
2457. *Hydroporus proximus* Aubé. (Sherman.)
2463. *Hydroporus mixtus* Lec. Dongan Hills, Aug. (Sherman).
2471. *Hydroporus striatopunctatus* Melsh. May, July, Aug. Dongan Hills in running water (Sherman). Clove Valley, June.
2473. *Hydroporus vitiosus* Lec. Running water, July (Sherman); June.
2501. *Hydroporus tristis* Payk. July.
2505. *Hydroporus americanus* Aubé. May, June, July, Sept.

2508. *Hydroporus signatus* Mann. March, May, June, July, Sept.
2510. *Hydroporus dichrous* Melsh. May, July, Aug.
2512. *Hydroporus inornatus* Sharp. February.
2514. *Hydroporus niger* Say. Jan., April, May, July, Aug., Sept., Oct.
2516. *Hydroporus ruficeps* Sharp. July, August (Sherman).
2521. *Hydroporus stagnalis* G. & H. Grasmere, July (Sherman); June.
2523. *Hydroporus oblitus* Aubé. S. I. (Sherman).
2531. *Hydroporus difformis* Lec. April, May, June.
2539. *Agabus seriatus* Say. April, August.
2543. *Agabus obtusatus* Say.
2550. *Agabus punctatus* Melsh. April, May, Aug. (Sherman); June.
2553. *Agabus semipunctatus* Kirby. May, woodland pools (Sherman).
2556. *Agabus tæniolatus* Harr. S. I. (Linell). Not recently found.
2557. *Agabus disintegratus* Cr. May, July, Dec.
2562. *Agabus reticulatus* Kirby. April (Shoemaker). July (Sherman).
2572. *Agabus erythropterus* Say.
2580. *Agabus gagates* Aubé. June, July, August.
2594. *Ilybius ignarus* Lec. June (Thompson). It is reported from Rockaway Beach, Long Island, by Sherman.
2598. *Ilybius biguttulus* Germ. Feb., May, June, July, Aug., Sept., Oct.
2600. *Ilybius confusus* Aubé. July (Sherman).
2602. *Agabetes acuductus* Harr. May, June, July, Sept.
2603. *Matus bicarinatus* Say. April, May, July, Aug., Oct.
2605. *Copelatus glyphicus* Chev. April, May, Aug.
2610. *Coptotomus interrogatus* Fab. April, June, July, Aug., Sept., Oct. Bred from a larva found among wet leaves at margin of the "Ink-well Pond."

2616. *Rhantus binotatus* Harr. April, also reported by Linell.
 2619. *Rhantus calidus* Fab. May, also at Quarry Ponds, Graniteville.
 2632. *Colymbetes sculptilis* Harr. April, May, June.
 2636. *Dytiscus fasciventris* Say. April, June, Nov. A male collected October 28, 1894, lived until June 1, 1895.
 2637. *Dytiscus hybridus* Aubé. July, Oct., Sept. (Linell, Ent. Am., iii, 1887, p. 27).
 2638. *Dytiscus verticalis* Say. April, May, July; sometimes found under electric lights, as are the other members of the genus. Female collected in the Great Swamp, March 13, 1898, lived until July 3, 1898. Sept. (Linell, Ent. Am., iii, 1887, p. 27).
 2647. *Hydaticus stagnalis* Fab. April, May; also reported by Sherman.
 2649. *Hydaticus piceus* Lec. April, June, July, Aug., Oct.
 2650. *Hydaticus bimarginatus* Say. June; also reported by Linell.
 2651. *Acilius semisulcatus* Aubé. May, Oct., Nov.
 2652. *Acilius fraternus* Harr. April, November.
 2653. *Acilius mediatu*s Say. April, August.
 2655. *Thermonectes basilaris* Say. April, May, July, Aug., Sept., Oct.
 2659. *Graphoderes liberus* Say. April, May, August.
 2660. *Graphoderes cinereus* L. April, June, August.
 2667. *Cybister fimbriolatus* Say. May; Aug. 14, 1908, at electric light.

FAMILY GYRINIDÆ

2671. *Dineutes vittatus* Germ. April, May, Aug., Oct.
 2674. *Dineutes discolor* Aubé. A common species.
 2679. *Dineutes nigrior* Roberts.
 2680. *Dineutes americanus* Say. April, May, October.
 2681. *Dineutes hornii* Roberts. April, Aug., October.
 2682. *Dineutes emarginatus* Say. May, June, Aug., Oct. Clove Valley, June 3, 1905, one sunning itself on a lily pad.

2686. *Gyrinus fraternus* Coup. April, May. Described from Canada; ranges fide Fall south to Riverhead, L. I. (Davis).
2688. *Gyrinus limbatus* Say. October 9, 1915 (Woodruff).
2690. *Gyrinus elevatus* Lec. March.
2691. *Gyrinus ventralis* Kirby. March, May, August.
2692. *Gyrinus aquiris* Lec. "Staten Island, Davis." H. C. Fall in The North Am. Species of *Gyrinus*.
- *Gyrinus woodruffi* Fall. Type locality, Willow Brook.
2696. *Gyrinus affinis* Aubé. Clove Valley, June; also reported by Linell.
2700. *Gyrinus analis* Say. May, August.
2707. *Gyrinus borealis* Aubé. May, June, August.
- 2707a. *Gyrinus lugens* Lec. May, October.

FAMILY HYDROPHILIDÆ

2718. *Ochthebius tuberculatus* Lec. July, Bull's Head (C. W. Leng, Jr.).
2729. *Hydrana pennsylvanica* Kies. On stick in brook.
2739. *Helophorus tuberculatus* Gyll. South Shore, July 19, 1915.
2744. *Helophorus obscurus* Lec. June. This species replaces *H. lacustris* of the New Jersey list according to Mr. Winters? (*obscurus* was described from Calif.).
2750. *Helophorus lineatus* Say. Jan., May, June, July. Bull's Head; Clove Valley; also reported by Linell.
2754. *Hydrochus scabratus* Muls. May, August.
2758. *Hydrochus inæqualis* Lec.? April, May. Reported by Linell, September 20, 1916, Bull's Head (Woodruff).
2761. *Hydrochus subcupreus* Rand. April.
2774. *Berosus aculeatus* Lec. Bull's Head pond, June 30, 1893.
2777. *Berosus peregrinus* Hbst. April, May.
2784. *Berosus striatus* Say. April, May, June, July, Aug.
2789. *Hydrous triangularis* Say. May, Aug., Sept., Oct. A specimen in confinement hatched from pupa about August 1, 1888. Found at New Brighton under wet leaves. October 30, 1902. Often found about electric lights.

2792. *Dibolocelus ovalis* Ziegl. Found in the woods among leaves on the ground, 1882.
2795. *Hydrophilus obtusatus* Say. March, April, May, June, July, Aug., Dec.
2805. *Tropisternus glaber* Hbst. May; Clove Valley, June.
2807. *Tropisternus lateralis* Fab. April, May, June, July, Aug.
2808. *Hydrobius fuscipes* Linn. May.
2810. *Hydrobius globosus* Say. Feb., May, June.
2819. *Paracymus subcupreus* Say. Feb., March, April. Border of salt meadow at Oakwood, March 18, 1894.
2834. *Enochrus nebulosus* Say. May.
2835. *Enochrus ochraceus* Melsh. April, May, Sept.
2836. *Enochrus perplexus* Lec. March, April, May, June, Sept., Dec. Found on meadows in salt water. Feb. 22, 1892.
2837. *Enochrus cinctus* Say. May. Also found under electric light.
2841. *Enochrus hamiltoni* Horn. April, May, June, Aug. Often found on salt meadow.
2843. *Enochrus reflexipennis* Zimm. April, May. Sometimes found on salt meadows. Also reported by Linell.
2850. *Cymbiodyta fimbriata* Melsh. March, May, Aug.
2852. *Cymbiodyta lacustris* Lec. March (Shoemaker).
2853. *Helocombus bifidus* Lec. May, July.
2854. *Laccobius agilis*. Rand.
2867. *Sphæridium scarabæoides* Linn. May, June, but found in cow-dung throughout the warmer months. *S. bipustulatum*, also an introduced species, has been found about Brooklyn, N. Y., by Mr. Shoemaker and is to be expected on Staten Island.
2869. *Cercyon littoralis* Gyll. Seashore, June 5.
2876. *Cercyon prætectatus* Say. April, May, June. April 15, Bull's Head, sifting leaves; in cow manure, May.
2879. *Cercyon lateralis* Marsh. "Mr. Wintersteiner displayed *Cercyon lateralis* (Staten Island, May 25, 1908, Davis), new to the New Jersey list, known from north Europe,

Siberia, and the Pacific coast." Bull. Brooklyn Ento. Soc., vol. IX, p. 27. Feb., 1914.

2883. *Cercyon hæmorrhoidalis* Fab. May.

2885. *Cercyon pygmæus* Illig. June 7, 1902 (Woodruff).

2893. *Cercyon analis* Payk. April, June, Dec., under pile of weeds in garden.

FAMILY SILPHIDÆ

2911. *Necrophorus americanus* Oliv. June, July.

2912. *Necrophorus sayi* Lap. Clove Valley, July, 1903.

2913. *Necrophorus orbicollis* Say. May, June, July, Aug. Sometimes attracted to light.

2914. *Necrophorus marginatus* Fab. April, May, June, Aug.

2918. *Necrophorus pustulatus* Hersch. May, July. Found under electric light at Egbertville and St. George. South Shore, Aug. (Cleaves).

2920. *Necrophorus tomentosus* Weber. July, Sept., Oct.

2922. *Silpha surinamensis* Fab. April, July, Aug. Found under electric light, March 25, 1910. This is a predaceous species and has been observed devouring fly larvæ.

2926. *Silpha inæqualis* Fab. April, May, June, July. At sap of willow, June 23. Found in copulation, March 20, 1898, at Ft. Lee, N. J.

2927. *Silpha noveboracensis* Forst. April. Found in copulation, March 20, 1898, at Ft. Lee, N. J.

2928. *Silpha americana* Linn. May, June, Aug. At willow sap, three individuals, June 23. This and the last two species usually in carrion.

2950. *Choleva simplex* Say. April 17, 1904 (Shoemaker); also specimens without date.

2951. *Choleva basillaris* Say. Feb., April.

2955. *Choleva terminans* Lec. March, April, May. Has been found on three occasions in owl pellets.

2957. *Prionochæta opaca* Say. April 17, 1904 (Shoemaker).

2965. *Ptomaphagus parasitus* Lec. April.

2996. *Anisotoma alternata* Melsh. October.
 3014. *Colenis impunctata* Lec. May, June.
 3022. *Leiodes polita* Lec. July.
 3023. *Leiodes discolor* Melsh. On slime mould, May, June.
 3025. *Leiodes obsoleta* Horn. Clove Valley, July 23, 1911.
 3026. *Leiodes basalis* Lec. Clove Valley, July 23, 1911. On
 slime mould, May, June.
 3029. *Agathidium oniscoides* Beauv. May, June, Sept. Com-
 mon under bark of dead trees; roll themselves into a
 ball.
 3030. *Agathidium exiguum* Melsh. May 16, 1908; June 20,
 1908.

FAMILY SCYDMÆNIDÆ

3073. *Euconnus salinator* Lec. March. Found on the salt
 meadows.
 3080. *Pycnophus rarus* Lec. April.
 3115. *Connophron frontale* Casey. Nov.
 3168. *Scydmanus perforatus* Schaum. Bull's Head, April.
 Sifting leaves, common (Nicolay & Woodruff).

FAMILY ORTHOPERIDÆ (CORYLOPHIDÆ)

3230. *Corylophodes marginicollis* Lec. March (Thompson).
 3239. *Rypobius marinus* Lec. Border of salt meadow at Oak-
 wood, March 18, 1894. April 30, salt meadow.
 3244. *Orthoperus glaber* Lec. June.
 3266. *Molamba lunata* Lec. One labeled "S. I." in Joutel coll.
 from Roberts coll.
 3271. *Molamba fasciata* Say. Recorded from Port Richmond
 by F. H. Chittenden as feeding on sap oozing from
 burrows of *Monarthrum fasciatum* in beech. Pro. Ento.
 Soc. of Wash., vol. 2, p. 391.

FAMILY STAPHYLINIDÆ

3305. *Triga picipennis* Lec. April. May, under bark of beech
 log.

3315. *Thoracophorus costalis* Er. April 26, 1911, under bark.
3412. *Olophrum obtectum* Er. March, April; border of salt meadow.
3461. *Geodromicus brunneus* Say (*cæsus* Er.). May.
3462. *Geodromicus strictus* Fauv.
3531. *Trogophlæus pudicus* Casey. Dongan's Island, June, 1914, running on the ground in bare places among *Salicornia*.
3556. *Apocellus sphaericollis* Say. Sept., found on sidewalk, Clove Road, West New Brighton.
3572. *Oxytelus insignitus* Grav.
3596. *Platystethus americanus* Er.
3719. *Stenus juno* Fab. Feb., sifting (Woodruff). April.
3736. *Stenus erythropus* Melsh. Feb., sifting (Woodruff).
3787. *Stenus stygicus* Say. June.
3832. *Stenus flavicornis* Er. Feb., sifting (Woodruff). June.
3833. *Stenus annularis* Er. May.
3841. *Stenus punctatus* Er. Oct.
3846. *Stenus arculus* Er. Oct.
3853. *Stenus croceatus* Casey. Feb., sifting (Woodruff).
3857. *Dianous cærulescens* Gyll. (*chalybæus* Lec.). Clove Valley on stones at foot of waterfall, April, May, June, July, Aug., Nov.
3872. *Euæstethus americanus* Er. October.
3892. *Palaminus testaceus* Er. May, June.
3908. *Gastrolobium bicolor* Grav. May, July.
3910. *Gastrolobium badium* Grav. Lake's Island, April 30, 1905; June.
3926. *Hesperobium pallipes* Grav. March, April, Sept., Nov.
3928. *Hesperobium cinctum* Say. Feb., sifting (Woodruff).
3952. *Pæderus littorarius* Grav. March, May, June, Nov.
4016. *Tetartopeus punctulatus* Lec. Sept. 30, 1915, sifting in Great Swamp.
4022. *Tetartopeus angularis* Lec. Four Corners, Jan. 19, 1913; Bull's Head, sifting, April.

4074. *Lathrobiella collaris* Er. May.
4088. *Microlathra pallidula* Lec. "Staten Island (Casey)," New Jersey list, 1910.
4093. *Aderocharis corticinus* Grav. June.
4105. *Trachysectus confluentus* Say. April, May.
4174. *Pseudomedon thoracicum* Casey (*Lithocharis obsoleta*). Four Corners, Jan. 19, 1913, sifting.
4248. *Stilicus dentatus* Say. April.
4257. *Stammoderus monstrosus* Lec. Four Corners, Jan. 19, 1913; Feb., sifting.
4260. *Astenus prolixus* Er. March, Sept.
4265. *Astenus binotatus* Say. Four Corners, Jan. 19, 1913, sifting.
4270. *Astenus brevipennis* Aust. May.
4278. *Astenus longiusculus* Mann. March, April, Nov.
4285. *Nudobius cephalus* Say. Clove Valley, April; September.
4308. *Gyrophypnus hamatus* Say. Beach near Oakwood, Sept. 15.
- *Gyrophypnus davisi* Ntm. On gravestones at St. Andrew's Church, Richmond, Aug. 31 and Sept. 28, 1923.
4356. *Diochus schaumii* Kraatz. Salt meadow, Nov. 6, 1909; also specimen without date.
4372. *Actobius cinerascens* Grav. Feb., sifting (Woodruff).
4374. *Actobius inutilis* Horn. Feb., sifting (Woodruff).
4375. *Actobius fraterculus* Horn.? Ward's Point in the sand about grass roots, Sept. 18.
4383. *Actobius parvus* Horn. Oct. 27.
4384. *Philonthus politus* Linn. (*æneus* Rossi.). June, Aug. Watchogue, Clove Valley.
4393. *Philonthus lætulus* Say. June.
4395. *Philonthus asper* Horn.
4420. *Philonthus debilis* Grav. Under weeds in garden, Dec.
4421. *Philonthus varians* Payk. May (Woodruff).
4423. *Philonthus longicornis* Steph.
4443. *Philonthus lomatus* Er.

4446. *Philonthus brunneus* Grav.
4447. *Philonthus cyanipennis* Fab. June, July, Aug., Sept.
Feeds on the fungus *Hygrophorus* according to Weiss.
4448. *Philonthus blandus* Grav. Sept. Feeds on the fungus
Russula crustosa (Weiss).
4506. *Cafius bistratus* Er. Ward's Point, June.
4513. *Hesperus baltimorensis* Grav. April, May, Sept.
4514. *Belonuchus formosus* Grav. June.
4532. *Staphylinus vulpinus* Nordm. May, Oct.
4533. *Staphylinus maculosus* Grav. April, May, June, Sept.
4534. *Staphylinus mysticus* Er. April, May, June.
4537. *Staphylinus tomentosus* Grav.
4543. *Staphylinus fossator* Grav. Aug., Watchogue.
4545. *Staphylinus cinnamopterus* Grav. June, July, Sept.
4546. *Staphylinus violaceus* Grav.
4551. *Ocypus ater* Grav. August.
4552. *Ontholestes cingulatus* Grav. May, June, Aug., Oct. On
fungus *Russula crustosa* according to Weiss.
4555b. *Creophilus villosus* Grav. April, May, June, Aug., Sept.
4574. *Quedius ferox* Lec.
4578. *Quedius vernix* Lec. June.
4579. *Quedius molochinus* Grav.
4600. *Quedius mesomelinus* Marsh. June.
4628. *Oxyporus femoralis* Grav. June, July, Sept., Oct.
4631. *Oxyporus major* Grav. Sept.
4634. *Oxyporus vittatus* Grav.
4637. *Oxyporus lateralis* Grav. Oct.
4652. *Tachinus memnonius* Grav. Nov.
4663. *Tachinus flavipennis* Dej. March, April; Rossville, in
horse manure, July 7, 1912.
4665. *Tachinus fimbriatus* Grav. June, July, Aug., Sept. On
fungus, *Collybia platyphylla* (Weiss).
4668. *Tachinus limbatus* Melsh. May, June.
4669. *Tachinus fumipennis* Say. May.
4679. *Tachyporus elegans* Horn.

4681. *Tachyporus jocosus* Say. Jan.
4686. *Tachyporus nitidulus* Fab. (*brunneus* Fab.). March, Nov.; salt meadow.
4690. *Erchomus ventriculus* Say. April, May, Aug. Under bark.
4695. *Conosoma knoxii* Lec.
4697. *Conosoma opicus* Say. April, June (Woodruff).
4698. *Conosoma imbricatus* Casey. Dec., under weeds in garden; also on fungus in October.
4705. *Conosoma basalis* Er. April, June, Sept.
4707. *Conosoma crassus* Grav. May, June, Aug., Sept.
4719. *Bolitobius dimidiatus* Er. September.
4723. *Bolitobius cincticollis* Say.
4724. *Bolitobius anticus* Horn. Aug., Nov.
4727. *Bolitobius trinotatus* Er.
4766. *Myllæna minuta* Gray. June.
4929. *Bolitochara picta* Casey. Sept.
4947. *Eumicrota corruscula* Er. Sept.
4966. *Gyrophæna lobata* Casey.
4995. *Gyrophæna fasciata* Say.
4999. *Gyrophæna dissimilis* Er. June.
5037. *Hoplandria lateralis* Melsh. Oct.
5083. *Tinotus caviceps* Casey.
5132. *Atheta klagesi* Bnhr.
5401. *Metaxya dichroa* Grav. Feb. 22, 1913, sifting (Woodruff).
5425. *Metaxya complana* Mann. Watchogue, April 22.
5570. *Sableta flaveola* Melsh. Aug.
5631. *Acrotone modesta* Melsh. March.
5743. *Meronera venustula* Er. Feb. 22, 1913, sifting (Woodruff).
5755. *Falagria dissecta* Er. April.
5763. *Aleochara brachyptera* Fourc.
5766. *Aleochara lata* Grav. April, in dead dog.

5775. *Aleochara americana* Casey.

5806. *Baryodma bimaculata* Grav. May, June. Tottenville, in dead snake, May 29.

5820. *Baryodma nitida* Grav. August.

FAMILY PSELAPHIDÆ

6174. *Batrisodes monstrosus* var. *ferox* Lec.

6200. *Batrisodes globosus* Lec. April, with ants in a log; also under bank, April 17.

6213. *Batrisodes nigricans* Lec. ? March, Nov. On salt meadow.

6216. *Batrisodes striatus* Lec. March, April, Nov. Found on salt meadow on several occasions.

6230. *Brachygluta abdominalis* Aubé. March, April, May, Nov. On salt meadow.

6247. *Brachygluta luniger* Lec. May; seashore.

6248. *Brachygluta cavicornis* Brend. May, on salt meadow.

6260. *Reichenbachia congener* Brend.

6264. *Reichenbachia rubicunda* Aubé. Feb. 22, 1913.

6320. *Decarthron longulum* Lec.

6322. *Decarthron strenuum* Brend. May; Clove Valley.

6351. *Pselaphus erichsoni* Lec. Iron ore ponds, Four Corners, February 22.

6353. *Pselaphus fustifer* Casey.

6359. *Pilopius lacustris* Casey. Feb. 22, 1913 (Woodruff).

FAMILY CLAVIGERIDÆ

6388. *Adranes cæcus* Lec. March 29, 1903, with ants; June 9, 1907, under bark in a stump.

6389. *Adranes lecontei* Brend.

FAMILY PTILIIDÆ

6459. *Acratrichis haldemani* Lec. Bull's Head, sifting leaves, April; also specimens without date.

FAMILY SCAPHIDIIDÆ

6482. *Scaphidium quadriguttatum* Say. June 7, 1902 (Woodruff). Var. *piceum* Melsh. Jan., April, May, June, Nov.
 6489. *Scaphisoma convexum* Say.
 6514. *Bæocera punctipennis* Blatch. Clove Valley, July 23.
 6515. *Bæocera concolor* Fab. Seashore, June 5.
 6528. *Toxidium gammaroides* Lec. June, September.

FAMILY HISTERIDÆ

6530. *Hololepta æqualis* Say. June, July.
 6546. *Hister arcuatus* Say. June; seashore.
 6570. *Hister stygicus* Lec. May (Schaeffer).
 6571. *Hister interruptus* Beauv. May.
 6572. *Hister obtusatus* Harris. Feb., June.
 6573. *Hister immunis* Er. May.
 6590. *Hister unicus* Casey. In toad-stools (Schaeffer).
 6596. *Hister abbreviatus* Fab. June, August.
 6601. *Hister furtivus* Lec. August.
 6606. *Hister depurator* Say.
 6627. *Hister americanus* Payk. April, May, Aug.
 6627a. *Hister perplexus* Lec.
 6651. *Platysoma carolinum* Payk.
 6653. *Platysoma depressum* Lec. April, May, June; Oct. 8. under bark of dead beech. March 25, 1919, under sycamore bark.
 6658. *Platysoma parallelum* Say. March.
 6659. *Platysoma coarctatum* Lec. March.
 6666. *Phelister subrotundus* Say.
 6674. *Phelister saunieri* Mars. Silver Lake (Schaeffer).
 6705. *Xestipyge geminatum* Lec. (Schaeffer).
 6723. *Paromalus æqualis* Say. April.
 6745. *Heterius brunneipennis* Rand. April 22, 1894, from ant's nest.

6755. *Onthophilus alternatus* Say.
 6765. *Plegaderus transversus* Say. April (Shoemaker).
 6781. *Acritus politus* Lec. Oct. 13, ant hill, Clove Valley.
 6790. *Acritus exiguus* Er. Feb., May, under bark of beech;
 Oct.
 6829. *Saprinus pennsylvanicus* Payk. June, July; often on the
 seashore.
 6836. *Saprinus assimilis* Payk. May, June, Aug.
 6875. *Saprinus sphaeroides* Lec. Tottenville, July 10 (Wood-
 ruff).
 6885. *Saprinus fraternus* Say. June, July; often on seashore.
 6896. *Saprinus patruelis* Lec. June, July, Aug.
 6901. *Saprinus dimidiatipennis* Lec. June, Aug.

FAMILY LYCIDÆ

6925. *Calopteron terminale* Say. July, August.
 6926. *Calopteron reticulatum* Fab. June, August.
 6929. *Cæniella* (*Cænia*) *dimidiata* Fab. June, August.
 6931. *Celetes basalis* Lec. June.
 6935. *Eros thoracicus* Rand (Joutel coll.).
 6939. *Eros aurora* Hbst. Great Kill, April 15, 1906.
 6942. *Eros trilineatus* Melsh. July.
 6944. *Plateros timidus* Lec. June.
 6945. *Plateros modestus* Say. June, July.
 6946. *Plateros canaliculatus* Say. July.
 6950. *Plateros floralis* Melsh.

FAMILY LAMPYRIDÆ

6971. *Lucidota atra* Say. June.
 6975. *Lucidota corrusca* Linn. March, April, May, Sept., Oct.
 6975a. Var. *autumnalis* Melsh. April, May, July.
 6979. *Lucidota decipiens* Harr. June, July.
 6988. *Photinus consanguineus* Lec. June, July.
 6996. *Photinus pyralis* Linn.

6999. *Photinus scintillans* Say. June, July, Aug. The common "firefly" of lawn and shrubbery. The female is wingless.
7013. *Photuris pennsylvanica* DeG. June, July. Makes the brighter greenish light among the higher trees.

FAMILY PHENGODIDÆ

7023. *Phengodes plumosa* Oliv. June, male. Mr. H. S. Barber has stated to the authors that this may be distinct from the *plumosa* of the south.
7037. *Omethes marginatus* Lec. June.

FAMILY CANTHARIDÆ

7051. *Chauliognathus pennsylvanicus* DeG. Aug., Sept., Oct.; often common on the flowers of the goldenrod, and sometimes called "Soldier-bug."
7052. *Chauliognathus marginatus* Fab. June, July.
7055. *Podabrus tricoloratus* Say. June, July.
7056. *Podabrus rugulosus* Lec. June, July.
7058. *Podabrus basilaris* Say. May, June.
7061. *Podabrus diadema* Fab. June.
7062. *Podabrus modestus* Say. May, June, July.
7092. *Cantharis excavatus* Lec.
7097. *Cantharis carolinus* Fab.
7098. *Cantharis lineola* Fab. June.
7100. *Cantharis nigritulus* Lec. June.
7101. *Cantharis rectus* Melsh. June.
7106. *Cantharis scitulus* Say. June, July, Aug.
7107. *Cantharis pusillus* Lec. July (C. W. L., Jr.).
7113. *Cantharis rotundicollis* Say. May, June, July.
7119. *Cantharis tuberculatus* Lec. May, June.
7121. *Cantharis bilineatus* Say. April, May. Found only in the spring.
7137. *Polemius laticornis* Say. June.

7139. *Polemius limbatus* Lec. June.
7161. *Silis bidentatus* Say. May, June.
7169. *Trypherus latipennis* Germ. June, July.
7180. *Malthodes exilis* Melsh. July, Buck's Hollow (C. W. L., Jr.). July 12, 1909.

FAMILY MELYRIDÆ

7207. *Collops nigriceps* Say. June, July, Aug., Sept.
7215. *Collops vittatus* Say. June.
7227. *Collops quadrimaculatus* Fab. July.
7276. *Anthocomus erichsoni* Lec. Old Place, June, 1918 (C. W. L., Jr.).
7282. *Pseudebæus oblitus* Lec.
7304. *Attalus pallifrons* Mots. Watchogue, June 28, 1918.
7322. *Attalus scincetus* Say.

FAMILY CLERIDÆ

7516. *Monophylla terminata* Say. Tottenville, June 14, 1912.
Frank H. Chittenden records in *Entomologica Americana*, vol. VI, p. 154, 1890, that on May 17, he saw on Staten Island a larva of this species engaged in devouring by absorbing its juices a larva of *Phymatodes* in an infested grape vine. The larvæ are predatory on borers in dead trees and seasoned wood; grape, persimmon, hickory, sassafras, ashboards, celtis, oak, honey locust (Pro. U. S. Nat. Mus., LVII, p. 626).
7545. *Cymatodera inornata* Say. Larvæ predatory on secondary wood-borers in hickory, birch, oak, hackberry, and beech.
7566. *Cymatodera undulata* Say. Larva in wild grape, hickory, hackberry, mulberry infested by Cerambycid larvæ.
7589. *Plæopterus thoracicus* Oliv. June.
7594. *Enoclerus nigrifrons* Say. June, July.
7595. *Enoclerus quadriguttatus* Oliv. March 29, 1903, on cedar.

7597. *Enoclerus rosmarus* Say. June, August.
 7629. *Trichodes nutalli* Kirby. July, 1915, in the fresh meadows back of South Beach (C. W. L., Jr.).
 7647. *Hydnocera humeralis* Say. May.
 7675. *Hydnocera verticalis* Say. June, July. Predatory upon small Cerambycid larvæ in grape and *Celastrus*.
 7677. *Hydnocera pallipennis* Say. July, Aug.
 7689. *Isohydnocera tabida* Lec. June. Predatory upon Mordeidid larvæ in stems of annual plants.

FAMILY CORYNETIDÆ

7696. *Phyllobænus dislocatus* Say. June. Larva predatory upon small borers in deciduous trees.
 7708. *Chariessa pilosa* Forst. Clove Valley, June 27, 1915; also hatched from hickory.
 7716. *Cregya oculatus* Say. March, on cedar; Clove Valley, June 26. June, 1918, Old Place on deciduous trees. Richmond, July 3. Larvæ predatory upon borers in conifers and deciduous trees.
 7727. *Necrobia rufipes* Fab. July, Aug., Sept.; often found on the beach on dead animals.
 7728. *Necrobia ruficollis* Fab. Aug., Sept.; with the last species.
 7729. *Necrobia violacea* Linn. August.

FAMILY CEPHALOIDÆ

7747. *Cephaloon lepturides* Newm. May 29, 1908, June 3. Common in the flowers of the tulip tree (*Liriodendron*) at Green Ridge, June 13, 1916.

FAMILY CÆDEMERIDÆ

7763. *Nacerda melanura* Linn. June, July.
 7776. *Alloxaxis dorsalis* Melsh. July, Aug. Once quite abundant under logs, etc., at what is now South and Midland Beaches.
 7799. *Asclera puncticollis* Say. May 8, 1881.

7800. *Asclera ruficollis* Say. Three found on flowers of *Erythronium*, April, 1892; May.

FAMILY MORDELLIDÆ

7804. *Tomoxia bidentata* Say. On dead oak log, Clove Valley, July 31, 1920.
7805. *Tomoxia lineella* Lec. June. See Martin L. Linell, Ent. Am., iii, Dec., 1887, p. 171. He collected both on Staten Island and considered *lineella* ♂ and *bidentata* ♀ of one species.
7810. *Mordella melæna* Germ. June, on wild rose.
7811. *Mordella scutellaris* Fab. June, Sept.
7814. *Mordella octopunctata* Fab. June, July; bred from hickory.
7817. *Mordella marginata* Melsh. June, July 4, 1912, on hickory.
7819. *Mordella serval* Say. August.
7838. *Mordellistena trifasciata* Say. July.
7839. *Mordellistena lepidula* Lec. June, July.
7841. *Mordellistena limbalis* Melsh.
7848. *Mordellistena vapida* Lec. Staten Island (Nicolay).
7856. *Mordellistena ornata* Melsh. June.
7858. *Mordellistena scapularis* Say. May, June.
7859. *Mordellistena comata* Lec. June, July, Aug., Sept.
7872. *Mordellistena grammica* Lec.
- 7872a. *Mordellistena varians* Lec. June 30, on flowers of wild parsnip with the last.
7879. *Mordellistena nigricans* Melsh. Seashore, June.
7881. *Mordellistena ruficeps* Lec. August.
7883. *Mordellistena splendens* Smith. August, on *Spartina*.
7888. *Mordellistena pustulata* Melsh. June.
7893. *Mordellistena morula* Lec. Clove Valley, June 26.
7894. *Mordellistena ambusta* Lec. July (C. W. L., Jr.).
7901. *Mordellistena marginalis* Say. June.
7910. *Mordellistena pubescens* Fab. June.
7912. *Mordellistena liturata* Melsh. July.

7926. *Mordellistena discolor* Melsh. July (Shoemaker).
 7942. *Anaspis flavipennis* Hald. May on *Veratrum*.
 7943. *Anaspis rufa* Say. June.

FAMILY RHIPIPHORIDÆ

7949. *Macrosiagon flavipenne* Lec. July.
 7950. *Macrosiagon dimidiatum* Fab. July, Aug.
 7956. *Macrosiagon limbatum* Fab. July, Aug.
 7958. *Rhipiphorus luteipennis* Lec. Aug.

FAMILY MELOIDÆ

7990. *Pomphopæa sayi* Lec. May.
 8018. *Epicauta vittata* Fab. July, Aug.; sometimes attracted by light.
 8024. *Epicauta cinerea* Forst. July, Aug., on tomato plants, also *Solanum carolinense*, *Ambrosia* and *Tephrosia*.
 8033. *Epicauta pennsylvanica* DeG. Aug., Sept., on goldenrod.
 8042. *Macrobasis unicolor* Kirby. June, July.
 8066. *Lytta nuttalli* Say. Eltingville, May 21, 1922 (Clarence Busted).
 8147. *Meloe angusticollis* Say.
 8148. *Meloe americanus* Leach. May, two specimens.
 8158. *Zonitis bilineata* Say. Aug.
 8194. *Tricrania sanguinipennis* Say. Found dead on sandy path, Watchogue, April 22, 1917.

FAMILY PYTHIDÆ

8204. *Pytho planus* Hbst. Nov. 1, 1908 (Skinner).

FAMILY PYROCHROIDÆ

8220. *Neopyrochroa flabellata* Fab. June, July, Aug.
 8221. *Neopyrochroa femoralis* Lec. May, June.
 8225. *Dendroides bicolor* Newm. June, July, Aug.

FAMILY PEDILIDÆ

8279. *Macratrìa murina* Fab. July (Thompson).

FAMILY ANTHICIDÆ

8304. *Notoxus monodon* Fab. March, May, Nov.
8334. *Tomoderus constrictus* Say. Feb., May.
8342. *Amblyderus pallens* Lec. Aug., Sept.
8347. *Anthicus formicarius* Laf. May, Sept., Nov.
8348. *Anthicus cinctus* Say. November 16 (Joutel).
8350. *Anthicus blandus* Casey. Tottenville, May 18.
8387. *Anthicus floralis* Linn. Clove Valley, July (C. W. L., Jr.).
8397. *Anthicus ephippium* Laf. Seashore, June 4.
8402. *Anthicus scabriceps* Lec. August 4, 1912, under log on seashore. June, Sept., Nov. Seashore, dug from sand.
8417. *Anthicus cervinus* Laf. August 4, seashore. June 4.
8448. *Anthicus melancholicus* Laf. June 5, seashore.
8454. *Anthicus pubescens* Lec. Nov. 6, 1909, on salt meadow. Clove Valley, Nov. 16.

FAMILY RHIPICERIDÆ

8544. *Sandalus petrophya* Knoch. Found on beech. Clove Valley, August 27, 1914, found on sidewalk.

FAMILY ELATERIDÆ

8561. *Adelocera discoidea* Web. March, April, May, June, Sept.
8571. *Alaus oculatus* Linn. May, June, July.
8572. *Alaus myops* Fab. Dongan Cedar Hill, southwest of Clove Valley.
8596. *Monocrepidius lividus* DeG. July.
8601. *Monocrepidius vespertinus* Fab.
8607. *Monocrepidius auritus* Hbst. March, April, May, June, July.
8609. *Monocrepidius bellus* Say. March, April, May, Oct.

8613. *Æolus amabilis* Lec. March, June.
8614. *Æolus dorsalis* Say. May.
8625. *Limonius propexus* Cand. May, June, July.
8627. *Limonius confusus* Lec. June (Shoemaker).
8629. *Limonius plebejus* Say. May.
8633. *Limonius quercinus* Say. May, June.
8635. *Limonius basillaris* Say. May, June.
8653. *Pheletes definitus* Ziegl. May.
8654. *Pheletes nimbatus* Say. May.
8663b. *Athous acanthus* var. *maculicollis* Lec.
8667. *Athous cucullatus* Say. June, July.
8715. *Ludius pyrrhos* Hbst. June, July, Aug.
8721. *Ludius cylindriciformis* Hbst. April, May.
8738. *Ludius tarsalis* Melsh. April.
8761. *Ludius æthiops* Hbst. May, June, July.
8780. *Ludius inflatus* Say. June.
8796. *Ludius hieroglyphicus* Say. June.
8813. *Hemicrepidius (Asaphes) decoloratus* Say. June.
8814. *Hemicrepidius (Asaphes) memnonius* Hbst. July, Aug.
8815. *Hemicrepidius (Asaphes) brevicollis* Cand. July.
8821. *Cryptohypnus exiguus* Rand. May; on oak.
8848. *Hypnoidus obliquatus* Melsh. One specimen marked
 " S. I." Usually found in moist sandy banks.
8853. *Melanactes piceus* DeG. May, June, July.
8855. *Melanactes morio* Fab. July.
8878. *Dolopius lateralis* Esch. May, June, July.
8881. *Sericus viridanus* Lec.
8883. *Sericus silaceus* Say.
8885. *Agriotes mancus* Say. March, April, May, June.
8887. *Agriotes insanus* Cand. May, June.
8893. *Agriotes pubescens* Melsh. May.
8897. *Agriotes oblongicollis* Melsh. May, June.
8906. *Glyphonyx recticollis* Say. June.
8907. *Glyphonyx testaceus* Melsh. July 23, 1911 (Shoemaker).
8934. *Elater nigricollis* Hbst. Feb., March, April, May, June.

8935. *Elater linteus* Say. April 11, 1910, under bark of white pine; June. South Shore, March (Pollard).
8936. *Elater sellatus* Dej. Feb. 2, 1896, under hickory bark.
8939. *Elater sayi* Lec. May.
8940. *Elater verticinus* Beauv.
8942. *Elater militaris* Harr.
8943. *Elater rubricus* Say. May, June, July.
8948. *Elater collaris* Say. May, June; Watchogue, on *Pyrus* flowers.
8950. *Elater sanguinipennis* Say. April, May.
8955. *Elater obliquus* Say. No date; also var. *areolatus* Say, Sept. 22, 1892. Old Place, June, 1918.
8960. *Elater pedalis* Germ. June (Shoemaker).
8964. *Elater mixtus* Hbst. May.
8969. *Elater nigricans* Germ. May, June.
8971. *Ectamenogonus melsheimeri* Leng. December.
8980. *Megapenthes limbalis* Hbst. July, August.
9019. *Melanotus decumanus* Er. July 2, 1907, attracted to electric light.
9030. *Melanotus tænicollis* Lec. June.
9035. *Melanotus communis* Gyll. April, May, June, Nov.
9036. *Melanotus fissilis* Say. May, June, Sept.
9040. *Melanotus parumpunctatus* Melsh. June, July.
9048. *Melanotus pertinax* Say. July (C. W. L., Jr.).
9051. *Melanotus americanus* Hbst. June, July.
9071. *Cardiophorus cardisce* Say. June.
9082. *Cardiophorus convexus* Say. May, June.
9087. *Cardiophorus gagates* Er. May, June.

FAMILY MELASIDÆ (EUCNEMIDÆ)

9127. *Isorhipis ruficornis* Say. June, July; often on beech.
9133. *Deltometopus amænicornis* Say. June 26, six specimens dug out of beech stump; July 23, beaten from branches of dead beech. July 10 (Shoemaker).

9157. *Microrhagus triangularis* Say.
 9172. *Hypocælus frontosus* Say. July.

FAMILY THROSCIDÆ

9204. *Throscus chevrolati* Bonv. Bull's Head, sifting, April (Nicolay).

FAMILY BUPRESTIDÆ

9286. *Acmaodera tubulus* Fab. May; sometimes on flowers of wild geranium. Bred from hickory, white oak, and redbud (Knull).
 9316. *Chalcophora virginensis* Dru. May 8, 1881, Watchogue. Breeds in pine.
 9333. *Dicerca divaricata* Say. March, April, Sept. Breeds in apple, beech, maple, and other deciduous trees.
 9334. *Dicerca caudata* Lec. Breeds in birch (Knull).
 9337. *Dicerca punctulata* Sch. April 30, Clove Valley, on pine in which it breeds. July.
 9341. *Dicerca obscura* Fab. Long Neck, Aug. 15, 1908; often found on persimmon. Breeds in staghorn sumach (Knull).
 9342. *Dicerca lurida* Fab. April, July, Sept.; often found on hickory.
 9349a. *Dicerca scobina* Chev. April, June.
 9355. *Cinyra gracilipes* Melsh. Great Kills, June; Old Place, June 28, 1918, three on *Quercus bicolor*. Breeds in oak and ironwood (Knull).
 9365. *Buprestis decora* Fab. Tompkinsville, May 8, 1919, introduced lumber.
 9391. *Melanophila acuminata* DeG. (*longipes* Say). Breeds in conifers.
 9392. *Anthaxia viridifrons* Gory. June 7; also raised from wood of shag-bark hickory. Breeds also in elm (Knull).
 9396. *Anthaxia quercata* Fab. (*cyanella* Gory.). June 25, 1892, on oak leaves. Larva in grape and chestnut (Chittenden), also redbud, thorn, pine, and larch (Knull).

9405. *Chrysobothris sexsignata* Say. Hatched from hickory; also in July. Breeds in many trees (Knull).
9408. *Chrysobothris lecontei* Leng. May, June, often on oak. Once found in abundance on dogwood. Breeds also in alder and sumach (Knull).
9448. *Chrysobothris pusilla* Cast. June. Breeds in pine, spruce, and hemlock (Knull).
9466. *Chrysobothris femorata* Oliv. May, June, July. On June 25, 1892, several were seen snapping their abdomens against a log on which they were running, thereby making a considerable noise.
9467. *Chrysobothris lesueuri* Cast.
9481. *Actenodes acornis* Say. June. Breeds in maple, black birch, beech, black oak, hickory (Knull).
9485. *Eupristocerus cogitans* Web. Breeds in alder forming galls on stems (Knull).
9491. *Agrilus bilineatus* Web. June, July; June 18, 1893, eight on scarlet oak. Breeds in oak and chestnut (Knull).
9504. *Agrilus anxius* Gory. June. The "Bronze Birch-borer." Breeds in birch, poplar, and willow (Knull).
9513. *Agrilus ruficollis* Fab. June, July, on blackberry. Forming galls on stems (Knull).
9515. *Agrilus masculinus* Horn. Breeds in red maple and box elder (Knull).
9520. *Agrilus egenus* Gory. June. On willow and locust.
9523. *Agrilus arcuatus* Say. June (Woodruff).
9529. *Agrilus imbellis* Cr. June (Woodruff).
9531. *Agrilus fallax* Say. Breeds in honey locust and hackberry (Knull).
9536. *Agrilus subcinctus* Gory. June (Woodruff).
9539. *Agrilus otiosus* Say. May, June, July; June 19, 1892, seven on dogwood. Breeds in hickory (Knull).
9547. *Agrilus obsoletoguttatus* Gory. June, on oak. Breeds also in blue beech, ironwood, beech, and hickory (Knull).

9551. *Agrilus granulatus* Say. June. Breeds in willow and poplar (Knull).
 9564. *Pachyschelus purpureus* Say. May, July.
 9567. *Pachyschelus ovatus* Say. June, July, Aug.; sometimes common on bush-clover. Mines leaves of *Desmodium* (Weiss).
 9572. *Brachys aërosus* Melsh. May, June, Aug.
 9573. *Brachys æruginosus* Gory. June.
 9574. *Brachys ovatus* Web. May, June; also var. *tessellata* Fab. On oak, mining the leaves.
 9578. *Taphrocerus gracilis* Say. June in swampy meadows.
 9584. *Mastogenius subcyaneus* Lec. Breeds in dead oak branches (Knull).

FAMILY PSEPHENIDÆ

9586. *Psephenus lecontei* Lec. July, on edge of swamp at Bull's Head (C. W. L., Jr.).

FAMILY DRYOPIDÆ (PARNIDÆ)

9604. *Helichus fastigiatus* Say.

FAMILY HELMIDÆ

9609. *Stenelmis crenata* Say. Egbertville Ravine, May; July.
 9618. *Helmis quadrinotata* Say. August, October.
 9622. *Helmis pusilla* Lec. July.
 9623. *Helmis foveata* Lec. Bull's Head, November (Woodruff).
 9640. *Macronychus glabratus* Say. May.
 9642. *Ancyronyx variegatus* Germ. Bull's Head, Sept. 30, 1916 (Shoemaker).

FAMILY HETEROCERIDÆ

9646. *Heterocerus undatus* Melsh. (*fatuus* Kies.). May, June. Salt meadow, April 1.

FAMILY DASCILLIDÆ

9682. *Eucinetus terminalis* Lec. Sept. 9.

FAMILY HELODIDÆ

9687. *Helodes pulchella* Guer.
9689. *Helodes thoracica* Guer.
9696. *Cyphon obscurus* Guer. June.
9697. *Cyphon collaris* Guer. May, June.
9698. *Cyphon variabilis* Thunb. Tottenville, May; Clove Valley, June; Sept., Nov.
9704. *Prionocyphon limbatus* Lec. June, September.
9708. *Scirtes tibialis* Guer. July 9, 1917.
9709. *Scirtes orbiculatus* Fab. June.
9716. *Ptilodactyla serricollis* Say. June.

FAMILY DERMESTIDÆ

9718. *Byturus unicolor* Say. May, Richmond; June, July.
9723. *Thylodrias contractus* Mots. A widely spread species; a colony in a fruit jar kept for a number of years by Joutel and later by Davis. The colony is still living and is now over twenty years old.
9725. *Dermestes caninus* Germ. May, June; found on dead animals.
9732. *Dermestes vulpinus* Fab. Aug.
9734. *Dermestes frischii* Kug. July, Aug., Sept., often under dead fish, etc., on the seashore.
9737. *Dermestes lardarius* L. Has been found at all seasons mostly on stored provisions.
9742. *Attagenus piceus* Oliv. The "black carpet beetle" is found in some one of its stages in houses at all seasons, the adults are often common in the spring.
9770. *Trogoderma ornata* Say. May, July.
9774. *Trogoderma tarsalis* Melsh. June, found in stored nuts; July.

9816. *Cryptorhopalum ruficorne* Lec. May 31, 1896, on strawberry blossoms, Watchogue.
9825. *Cryptorhopalum picicorne* Lec. Long Neck, Sept. 21, 1917.
9829. *Anthrenus scrophulariæ* Linn. The "carpet beetle" is found out of doors on flowers, often on *Pyrus*, in May. The larvæ infest woolens chiefly and often do considerable damage in the house. In this stage they are known as "Buffalo moths."
9835. *Anthrenus verbasci* Linn. March, April, May.
9837. *Anthrenus museorum* Linn. July.
9846. *Orphilus niger* Rossi. (*glabratus* Fab.). May. This is *O. ater* Erichson according to Casey, Journal N. Y. Ento. Soc., vol. 8, p. 164.

FAMILY BYRRHIDÆ

9864. *Cytilus alternatus* Say (*trivittatus* Melsh.). May; Old Place, June, 1918, on the ground among grass roots.

FAMILY OSTOMIDÆ

9954. *Corticotomus parallelus* Melsh.
9976. *Temnochila virescens* Fab.
9977. *Tenebroides mauritanicus* Linn. The "Cadelle." On Staten Island found in stored wheat in July, Aug.
9984. *Tenebroides bimaculatus* Melsh. June.
9989. *Tenebroides collaris* Sturm.
9990. *Tenebroides americanus* Kirby.
9994. *Tenebroides corticalis* Melsh. April, May, June, July, Nov.
10010. *Thymalus marginicollis* Chev. May, June; often found on the fungus *Polyporus betulinus* of the white birch.

FAMILY NITIDULIDÆ

10016. *Cercimetes abdominalis* Er. May; June 26, Clove Valley, on elder blossoms.

10017. *Brachypterus urticæ* Fab.
10030. *Colopterus semitectus* Say. Arlington, April 24 (Woodruff).
10032. *Colopterus truncatus* Rand. On cedar, March 23; April, May.
10035. *Conotelus obscurus* Er.
10040. *Carpophilus floralis* Er. June 14, 1902, seventeen individuals in a single flower of the prickly pear.
10042. *Carpophilus hemipterus* Linn. From dried figs.
10052. *Carpophilus niger* Say. May, June, July.
10057. *Carpophilus corticinus* Er. May, August.
10058. *Carpophilus brachypterus* Say. April, May.
10060. *Carpophilus antiquus* Melsh. June.
10065. *Nitidula bipunctata* Linn. July 23, 1922. In peaches not grown, however, on Staten Island.
10067. *Nitidula rufipes* Linn. April, May, Sept.
10069. *Omosita colon* Linn. March, April, June, Sept.; often on dead animals.
10073. *Epuræa helvola* Er. August, September.
10074. *Epuræa rufa* Say. March, May, Dec. April 4, sifting leaves in garden, West New Brighton.
10078. *Epuræa rufida* Melsh. Feb., June (Woodruff).
10093. *Epuræa labilis* Er. May.
10098. *Stelidota geminata* Say. Aug., on decaying pears. On the fungus *Russula cristosa* according to Weiss.
10099. *Stelidota octomaculata* Say. June. Trapped in molasses jar. On the fungus *Boletus* according to Weiss.
10101. *Prometopia sexmaculata* Say. April, May, June, Aug., Sept. Oct. 8, under bark of dead beech.
10105. *Lobiopa undulata* Say. June, July.
10109. *Phenolia grossa* Fab. April, May, June.
10113. *Amphicrossus ciliatus* Oliv. May.
10117. *Pocadius helvolus* Er.
10122. *Oxycnemus histrinus* Lec. August.
10125. *Pallodes silaceus* Er. June to Nov.; often in fungi.

10129. *Cryptarcha ampla* Er. April, May, July; on sap.
 10132. *Cryptarcha concinna* Melsh. May, June.
 10136. *Glischrochilus obtusus* Say. Bull's Head, Aug. 25, 1923.
 Under bark of dying red maple (Shoemaker).
 10137. *Glischrochilus fasciatus* Oliv. April, May, July, Aug.
 10138. *Glischrochilus sanguinolentus* Oliv. April, May, Aug.,
 Sept.

FAMILY RHIZOPHAGIDÆ

10144. *Rhizophagus bipunctatus* Say.
 10149. *Rhizophagus sculpturatus* Mann. April 24 (Woodruff).

FAMILY MONOTOMIDÆ

10158. *Monotoma producta* Lec. June; found along the shore,
 sometimes under the bark of old logs.
 10159. *Monotoma picipes* Hbst.
 10163. *Monotoma fulvipes* Melsh. May.
 10183. *Bactridium ephippigerum* Guer. Arlington, April (Wood-
 ruff).
 10185. *Bactridium striolatum* Reit. May, under bark of beech.
 10190. *Pycnotomina cavicolle* Horn. Under bark, near Bull's
 Head, Aug. 25, 1923 (Shoemaker).

FAMILY CUCUJIDÆ

10194. *Oryzophilus surinamensis* Linn. Found in dried fruits at
 all seasons.
 10198. *Silvanus bidentatus* Fab. April, June, August.
 10199. *Silvanus planatus* Germ. May, under bark.
 10200. *Silvanus imbellis* Lec. February 22, 1913, sifting (Wood-
 ruff).
 10204. *Cathartus advena* Walth. Found in dried pears from
 California.
 10211. *Catogenus rufus* Fab. June 4, 1912, and June 5, 1914, on
 the shore at Tottenville.

10221. *Cucujus clavipes* Fab. Jan., Feb., April, May; under bark.
10225. *Læmophlæus biguttatus* Say. April, May.
10226. *Læmophlæus fasciatus* Melsh. April (Woodruff).
10236. *Læmophlæus convexulus* Lec. May 6, under beech bark.
10239. *Læmophlæus adustus* Lec. June, under bark of willow.
10242. *Læmophlæus modestus* Say. May, under bark of beech.
In garden, West New Brighton, on peach tree, May 15, 1918.
10246. *Læmophlæus liquidus* Casey. April, May, June. October under bark of dead beech, Clove Valley.
10274. *Brontes debilis* Lec. May, June, Sept., 1919, under bark.
10276. *Telephanus velox* Hald. March, April, May, July, Aug., Oct.

FAMILY EROTYLIDÆ

10282. *Languria mozardi* Lat. May, June; often common on dandelion flowers.
10284. *Languria tædata* Lec. July.
10286. *Languria angustata* Beauv. Jan. 19, 1924, under stones at grassy edge of cultivated field, Old Place.
10287. *Languria trifasciata* Say.
10292. *Acropteroxys gracilis* Newn. June, July.
10308. *Tritoma sanguinipennis* Say.
10309. *Tritoma pulcher* Say. August. Many in a fungus, Sept. 17, 1914, in Buck's Hollow.
10314. *Tritoma angulata* Say. July; found in fungus.
10317. *Tritoma biguttata* Say. August.
10319. *Tritoma humeralis* Fab.
10328. *Triplax flavicollis* Lec.
10334. *Triplax thoracica* Say. June, July.
10347. *Megalodacne fasciata* Fab. Larvæ feed on the fungus *Polyporus lucidus* according to Weiss.

FAMILY DERODONTIDÆ

10350. *Laricobius erichsoni* Rosenh. December.
10353. *Derodontus maculatus* Melsh.

FAMILY CRYPTOPHAGIDÆ

10356. *Diplocælus brunneus* Lec. Buck's Hollow. On dry fungus.
 10360. *Telmatophilus americanus* Lec. June.
 10365. *Tomarus pulchellus* Lec. March 26, in nest of mouse; April, Sept., Oct., Nov., from *Hibiscus moscheutos*; Bull's Head, sifting, April (Nicolay).
 10398. *Cryptophagus croceus* Zimm. July (C. W. L., Jr.).
 10463. *Anchicera ephippiata* Zimm. Bull's Head, sifting, April (Nicolay); also specimens without date.
 10467. *Anchicera distincta* Casey. Bull's Head, sifting, April (Nicolay).

FAMILY MYCETOPHAGIDÆ

10490. *Mycetophagus punctatus* Say. August.
 10491. *Mycetophagus flexuosus* Say. April, June.
 10501. *Mycetophagus pluripunctatus* Lec. July 4, in fungus on maple.
 10509. *Typhæa fumata* Linn.
 10511. *Litargus tetraspilotus* Lec. August.
 10512. *Litargus sexpunctatus* Say. April.
 10514. *Litargus nebulosus* Lec. Fort Wadsworth, April 27, 1911.
 10517. *Litargus didesmus* Say. May, June (Thompson).

FAMILY COLYDIIDÆ

10530. *Synchita fuliginosa* Melsh. June 25, Clove Valley; June 20, 1918, Buck's Hollow, in old fungus on a stump.
 10541. *Bitoma quadriguttata* Say.
 10576. *Aulonium parallelopipedum* Say. Feb. 16, 1913, under bark of elm at Tottenville.
 10580. *Colydium lineola* Say. June.
 10598. *Cerylon castaneum* Say. April, Nov. (Shoemaker and Woodruff). May, under bark; October, under beech bark, Clove Valley.

10601. *Cerylon sticticum* Casey. July.
 10604. *Philothermus glabriculus* Lec. April, May.

FAMILY LATHRIDIIDÆ

10631. *Lathridius liratus* Lec. July (C. W. L., Jr.).
 10693. *Corticaria elongata* Gyll. Bull's Head, October 9; sifting.
 10703. *Melanophthalma pumila* Lec. (Joutel).
 10712. *Melanophthalma americana* Mann. June.
 10713. *Melanophthalma cavicollis* Mann. Feb. 22 (Woodruff).
 Sept.

FAMILY MYCETÆIDÆ

10716. *Mycetæa hirta* Marsh. March, in decaying fungus covered stumps. May 5, in black fungus on logs in West New Brighton garden.
 10717. *Rhanis unicolor* Ziegl. April, June, July, Nov.

FAMILY ENDOMYCHIDÆ

10720. *Lycoperdina ferruginea* Lec. June, December.
 10726. *Aphorista vittata* Fab.
 10753. *Endomychus biguttatus* Say. Jan., April, May, July, Oct.,
 under bark of beech.

FAMILY PHALACRIDÆ

10772. *Phalacrus pumilio* Lec. May, June; seashore.
 10773. *Phalacrus politus* Melsh. June.
 10780. *Olibrus semistriatus* Lec. August.
 10786. *Olibrus pallipes* Say.
 10813. *Acylopus ergoti* Casey. May.
 10829. *Stilbus apicalis* Melsh. May, August.
 10844. *Stilbus nitidus* Melsh. April.

FAMILY COCCINELLIDÆ

10879. *Hyperaspis signata* Oliv. May, June, July, Aug.
 10880. *Hyperaspis proba* Say. August, September.

10908. *Hyperaspis fimbriolata* Melsh. June 5, 1913, two collected on the shore at Ward's Point.
10922. *Hyperaspis troglodytes* Muls. July (C. W. L., Jr.).
10930. *Hyperaspis undulata* Say. June 5, 1913, seven collected on the shore at Ward's Point.
10972. *Brachyacantha ursina* Fab. May, June, July; a common species.
- 10974a. *Brachyacantha decempustulata* Melsh. June, July.
10989. *Microceisa misella* Lec. July, August.
10998. *Stethorus punctum* Lec. Tottenville, Aug. 27, 1905; Long Neck, Sept. 21, 1907, many specimens.
11013. *Scymnus hæmorrhous* Lec.
11016. *Scymnus chromopyga* Casey. May, July, August.
11018. *Scymnus cervicalis* Melsh. Long Neck, September 21, 1907.
11028. *Scymnus collaris* Melsh. May, July, Aug.; Great Kill, Tottenville, Watchogue.
11055. *Scymnus tenebrosus* Muls. June, July, August.
11082. *Scymnus americanus* Muls. May, June, August.
- 11093a. *Scymnus flavifrons* var. *bioculatus* Muls.
11150. *Psyllobora viginti-maculata* Say. July, Sept., Oct.
11154. *Anisosticta bitriangularis* Say. In swampy places.
11155. *Næmia seriata* Melsh. May, Aug., Sept. Sometimes quite common on the seaside goldenrod *Solidago sempervirens*.
11158. *Ceratomegilla fuscilabris* Muls. June, Aug., Oct. Some years ago in the Great Swamp near Bull's Head a great number of these beetles were found gathered together at the foot of a tree.
11162. *Hippodamia tredecimpunctata* Linn. July, Aug.; Clove Valley and seashore.
11163. *Hippodamia parenthesis* Say. May, June, July, Aug.
11171. *Hippodamia glacialis* Fab. June, July, Aug., Sept. Fig. 63, plate xv, vol. xi, Journal N. Y. Ento. Soc., shows an unusually dark form taken on Staten Island, October 3. A similar specimen was found on Rockaway Beach, Long Island, N. Y., June 26, 1910.

11173. *Hippodamia convergens* Guer. June, July, Aug., Nov.; a common species.
11181. *Coccinella perplexa* Muls. (*trifasciata* Linn. is of Europe). May, June, July, Aug. This species has become very plentiful of recent years and is often found on the white birches infested with plant lice.
11184. *Coccinella novemnotata* Hbst. March, June, July, Aug.; a common species.
11185. *Coccinella transversoguttata* Fald. Watchogue, July (C. W. L., Jr.). Like *C. perplexa* it seems to be working its way southward and has recently been found in New Jersey.
11190. *Cycloneda munda* Say. June, July, Aug., Sept., Oct.
11193. *Adalia bipunctata* Linn. April, May, June, July, Aug., Oct. This species is often found hibernating in dwellings. On December 29, 1907, one hundred and seventy-nine of these beetles were found under a cardboard sign about one foot square tacked on the trunk of a tree.
11196. *Cleis picta* Rand. Clove Valley, April 30; Ward's Point on shore, June 5, 1913.
11202. *Anatis quindecimpunctata* Oliv. May, June, July, Aug., Sept., Oct. Var. *mali* Say, shore at Ward's Point, June 5, 1913.
11205. *Neomysia pullata* Say. March, June, July.
11212. *Axion tripustulatum* DeG. June, September.
11217. *Chilocorus bivulnerus* Muls. April, May, June, July.
11220. *Exochomus marginipennis* Redt. June, July, September; usually found on oak.
11229. *Epilachna borealis* Fab. April, May, June, Aug.

FAMILY ALLECULIDÆ (*Cistelidæ*)

11246. *Hymenorus niger* Melsh.
11251. *Hymenorus pilosus* Melsh. June, July, Aug.
11255. *Hymenorus obscurus* Say. June.

11307. *Isomira sericea* Say. June, July.
 11311. *Isomira quadristriata* Coup. July.
 11320. *Capnochroa fuliginosa* Melsh. June; Richmond, Rossville.
 11333. *Mycetochara binotata* Say. June.
 11337. *Mycetochara analis* Lec. Seashore, June 4, 1912.
 11355. *Androchirus erythropus* Kirby.

FAMILY TENEBRIONIDÆ

11551. *Bothrotes arundinis* Lec. September.
 12187. *Opatrinus aciculatus* Lec. May, June, July, Oct., Nov.
 12188. *Opatrinus minimus* Beauv. (*notus* Say). September.
 12207. *Blapstinus metallicus* Fab. Seashore, May 28, 1914; June 26, 1915.
 12208. *Blapstinus interruptus* Say. June.
 12227. *Blapstinus mæstus* Melsh. May 29, on prickly pear. Arrochar, September 26, 1908.
 12275. *Ammodonus fossor* Lec. May, June, July, Sept. At Ward's Point, near Tottenville, where it is not uncommon on the sand of the up-beach, which it resembles closely in color. The beetles run an inch or two, then stop a short time before running again. They are found mating in July on the surface of the sand, but on Sept. 18, the only ones discovered were about four or five inches below the surface among the roots of the Large Crab grass, *Syntherisma sanguinale*.
 12286. *Phaleria testacea* Say. May, June, July, Aug.; on seashore.
 12295. *Bolitotherus cornutus* Panz. Feeds on the fungus *Polyporus betulinus* and *lucidus* according to Weiss.
 12305. *Diaperis maculata* Oliv. (*hydni* Fab.). April, May, June, Aug., Sept.
 12308. *Hoplocephala viridipennis* Fab. April (Pollard); Clove Valley, May, under bark of beech log.
 12309. *Hoplocephala bicornis* Fab. Feb., March, April, May. Feeds in the fungus *Trametes suaveolens* according to Weiss.

12314. *Platydema excavatum* Say. April, May, July.
12318. *Platydema ruficorne* Sturm. April, May, June, Sept.
12321. *Platydema ellipticum* Fab. April 10, 1904 (Shoemaker).
July (Woodruff).
12323. *Platydema americanum* Cast. & Brill. June (Woodruff).
12328. *Platydema subcostatum* Cast. & Brill. May, July.
12336. *Gnathocerus cornutus* Fab.
12343. *Tribolium ferrugineum* Fab. April, Sept., Oct., on dried
insects and in candy box.
12345. *Tribolium confusum* Duval. In bakery.
12353. *Uloma impressa* Melsh. March, April, May, Aug., Sept.
12362. *Eutochia picea* Melsh. April, also two specimens in
Roberts collection.
12374. *Hypophlæus parallelus* Melsh. March.
12377. *Hypophlæus thoracicus* Melsh. Dead under bark, May 5.
12386. *Scotobates calcaratus* Fab. June, July, Aug.
12391. *Xylopinus ænescens* Lec. July.
12392. *Haplandrus fulvipes* (Hbst.) Fab. June, July, Aug.
12407. *Alobates pennsylvanica* DeG. Feb., March, April, May,
June, July, also in the fall; mostly under bark.
12413. *Tenebrio obscurus* Fab. May, June, Aug.
12414. *Tenebrio molitor* Linn. Found about storehouses, stables,
etc., or wherever there is old straw or grain. June
(Pollard); July 4, 1912, under bark of hickory at
Watchogue; July 9, 1912, at light.
12415. *Tenebrio picipes* Hbst. (*tenebrioides* Beauv.). April,
May, June, July 15, 1915, at "sugar."
12423. *Boros unicolor* Say. Clove Valley, April 23, 1904, and
Nov. 8, 1904, in pine (Shoemaker).
12425. *Anædus brunneus* Ziegl. April, November.
12432. *Paratenetus punctatus* Spin. June. Seashore.
12446. *Tarpela micans* Fab. April, May, June, July.
12448. *Tarpela venusta* Say. Clove Valley, August 3, 1912.
12469. *Helops æreus* Germ. May, June.

12485. *Meracantha contracta* Beauv. Bloodroot Valley, July 4, 1899. Taken in molasses trap, July 2, 1921.
 12488. *Strongylium tenuicolle* Say. June; July 16, 1912, at light; July, 1920, in garden at St. George.

FAMILY LAGRIIDÆ

12497. *Arthromacra ænea* Say. May, June.
 12502. *Statira gagatina* Melsh. June, July.

FAMILY MELANDRYIDÆ

12521. *Abstrulia tessellata* Melsh. June.
 12527. *Penthe obliquata* Fab. Jan., March, April, May, June, Oct., Nov.
 12528. *Penthe pimelia* Fab. Collected many years ago.
 12529. *Synchroa punctata* Newn. May, June, July, Aug.
 12531. *Eustrophinus bicolor* Say. April, May, June, Aug., Sept. 15, in the fungus at Watchogue.
 12535. *Eustrophus tomentosus* Say. May.
 12537. *Holostrophus bifasciatus* Say. Clove Valley (Bischoff). May.
 12541. *Hallomenus punctulatus* Lec. July.
 12546. *Orchesia castanea* Melsh. May, larva in fungus; June, July, Aug.
 12547. *Orchesia gracilis* Melsh. June, July, Nov.
 12552. *Melandrya striata* Say. May, June.
 12553. *Emmesa labiata* Say. May, June.
 12564. *Spilotus quadripustulatus* Melsh. June.
 12569. *Mystaxus simulator* Newn. March.
 12570. *Dircæa quadrimaculata* Say. June, July, Aug.; hatched from blue beech in June, 1892.
 12576. *Microtonus sericans* Lec. June.
 12577. *Symphora flavicollis* Hald. June.
 12578. *Symphora rugosa* Hald.
 12587. *Canifa pallipennis* Lec. June.
 12588. *Canifa pallipes* Melsh. July 7.

FAMILY PTINIDÆ

12612. *Ptinus brunneus* Dufts.
12613. *Ptinus fur* Linn. April.

FAMILY ANOBIIDÆ

12639. *Eucrada humeralis* Melsh. Buck's Hollow, numerous on trunk of dead oak, May 31, 1908, and again May 30, 1909.
12684. *Oligomerus sericans* Melsh. Aug. 6.
12686. *Oligomerus obtusus* Lec. "Staten Island, New Jersey (Fall)." N. J. list, 1909, and Trans. Am. Entó. Soc., XXXI, p. 166.
12689. *Sitodrepa panicea* Linn. Feb., April, Aug.; it is a herbarium pest; found in box of crackers; also destroying leather bag.
12695. *Trichodesma gibbosa* Say. Found on fungus on apple tree.
12705. *Hadrobregmus carinatus* Say (*errans* Melsh.).
12717. *Trypophytys sericeus* Say. June, July.
12742. *Lasioderma serricorne* Fab. The "tobacco beetle"; has been found feeding on stored paprika on Staten Island.
12752. *Petalium seriatum* Fall. "Staten Island" (Trans. Am. Ento. Soc., XXXI, 1905, p. 216).
12804. *Catorama grave* Lec. Clove Valley, June 26.
12855. *Cænocara oculata* Say. May, Aug., Nov.

FAMILY BOSTRICHIDÆ

12870. *Endecatomus reticulatus* Hbst. Found in the fungus *Polyporus gilvus*.
12873. *Scobicia bidentata* Horn. Clove Valley, June 26. Old Place, June 28 (C. W. L., Jr.).
12902. *Bostrichus bicornis* Web. Clove Valley, June 26.
12905. *Micrapate dinoderoides* Horn. Seashore, June 5.
12913. *Stephanopachys rugosus* Oliv. May.

FAMILY LYCTIDÆ

12938. *Lyctus opaculus* Lec. Reported as occurring on Staten Island in U. S. Dept. Agri. Bureau of Ento., Technical Series No. 20, Part iii, p. 134. Clove Valley, June 26, and Richmond, June 8.
12940. *Lyctus planicollis* Lec. Boring in maple in Museum Staten Island Inst. of Arts and Sciences. Emerged April, 1919 (E. J. Burns).

FAMILY SPHINDIDÆ

12949. *Sphindus americanus* Lec. Clove Valley, June.

FAMILY CISIDÆ

12960. *Cis falli* Blatchley. Clove Valley, Oct. 8, 1916, under bark of dead tree.
12972. *Cis fuscipes* Mell. Sept.
12992. *Orthocis punctata* Mell. March.
12997. *Xestocis levetti* Casey. May, from fungus.
12998. *Xestocis davisii* Dury. Type locality, Staten Island (Cin. Soc. of Natural History, 1917, p. 16).
13018. *Ennearthron thoracicornis* Ziegl. June, Aug., from fungus, *Polyporus versicolor*.
13030. *Ceracis sallei* Mell. Aug. Breeds according to Weiss in *Fomes applanatus*.

FAMILY SCARABÆIDÆ

13048. *Canthon lævis* Dru. Years ago it was common on the Island; it was found in 1910 and again in 1914 on the Concord Downs by Mr. O. Fulda. August 19, 1903 (Woodruff).
13052. *Canthon viridis* Beauv. Near Egbertville, August 7.
13057. *Chæridium histeroides* Web. June, on dead fish.
13059. *Pinotus carolinus* Linn. June.
13062. *Copris minutus* Dury. April, September.

13065. *Copris tullius* Oliv. (*anaglypticus* Say). May, September.
13072. *Phanæus carnifex* Linn. June, July, Aug., Sept.
13080. *Onthophagus hecate* Panz. May, June, July, Aug.; June 6, 1908, in a decayed cabbage in a field.
13084. *Onthophagus janus* Panz. July, August.
- 13084a. *Onthophagus striatulus* Beauv. July, Aug., Sept.
Found in fungus in Clove Valley, Aug. 3.
13086. *Onthophagus pennsylvanicus* Harold. August.
13107. *Aphodius fossor* Linn. June.
13119. *Aphodius fimetarius* Linn. April, June, July.
13127. *Aphodius ruricola* Melsh.
13131. *Aphodius granarius* Linn. March, April, May, June, July, Aug.
13132. *Aphodius vittatus* Say.
13159. *Aphodius rubeolus* Beauv. June.
13162. *Aphodius stercorosus* Melsh. June.
13184. *Aphodius distinctus* Mull. April, Oct., found on one occasion in a dead blacksnake.
13210. *Oxyomus silvestris* Scop. (*porcatus* Fab.). April, May.
April and December, under piles of weeds in garden, West New Brighton.
13220. *Atænius imbricatus* Melsh.
13233. *Atænius cognatus* Lec.
13285. *Odontæus corniger* Melsh.
13288. *Bolbocerosoma farctum* Fab. New Brighton, July 14, 1905; May 6, 1906, under an old coat in a field near Richmond.
13289. *Eucanthus lazarus* Fab.
13291. *Geotrupes horni* Blanch.
13293. *Geotrupes blackburni* Fab. August, October.
13294. *Geotrupes egeriei* Germ. May, Aug., Sept.
13299. *Geotrupes splendidus* Fab. May, June, July, Oct.
13313. *Amphicoma lupina* Lec. Sept., 1907; also reported from Staten Island by Mr. Schaeffer.

13328. *Trox scabrosus* Beauv. Seashore.
13331. *Trox suberosus* Fab. June, seashore.
13336. *Trox erinaceus* Lec. Found in owl pellets in February, April, May; under dead rabbit, September 18.
13337. *Trox capillaris* Say.
13338. *Trox unistriatus* Beauv. June, August.
13339. *Trox sordidus* Lec. April.
13340. *Trox insularis* Chev. (*foveicollis* Harold.). August.
13341. *Trox terrestris* Say. July.
13342. *Trox æqualis* Say.
13344. *Trox scaber* Linn. April, May, June; sometimes at light.
13354. *Serica vespertina* Gyll. April, May, June, July.
13356. *Serica evidens* Blatchley. May, Aug.
—— *Serica lecontei* Dawson (Jour. N. Y. Ento. Soc., vol. 29. p. 161). Paratype from S. I.
13361. *Serica iricolor* Say. June.
—— *Serica parallela* Casey. Staten Island (Dawson). Jour. N. Y. Ento. Soc., 30: 159.
13364. *Serica sericea* Ill. April, May, June, July; often at light.
13372. *Serica trociformis* Burm. May, June.
13376. *Diplotaxis sordida* Say. June.
13405. *Diplotaxis atlantis* Fall. April, May, June, July.
13496. *Phyllophaga gracilis* Burm. June, July, Aug. The members of this genus are commonly known as "June Bugs."
13497. *Phyllophaga futilis* Lec. June.
13508. *Phyllophaga micans* Knoch. May, June.
13511. *Phyllophaga fusca* Fröehl. April, May, June, July.
13515. *Phyllophaga fervida* Fab.
13517. *Phyllophaga drakei* Kby. June.
13522. *Phyllophaga fraterna* Harr. April, May, June.
13523. *Phyllophaga forsteri* Burm. April 22, 1915 (Woodruff).
13528. *Phyllophaga knochii* Gyll.
13532. *Phyllophaga hirsuta* Knoch. May, June, July.
13538. *Phyllophaga hirticula* Knoch. May.
13540. *Phyllophaga ilicis* Knoch.

13544. *Phyllophaga crenulata* Frœl. April, May, June, July, Aug.
13563. *Phyllophaga tristis* Fab. May.
13624. *Polyphylla variolosa* Hentz. June, July; at light.
13649. *Dichelonyx elongata* Fab. June.
13651. *Dichelonyx subvittata* Lec. May, June.
13676. *Dichelonyx albicollis* Burm. June; on pine.
13685. *Macroductylus subspinosus* Fab. June, July. The rose bug with extraordinary long legs.
13694. *Hoplia trifasciata* Say. April; sometimes common on hickory buds.
13695. *Hoplia trivialis* Harold. April, May.
13697. *Hoplia limbata* Lec. June.
13698. *Hoplia equina* Lec. July.
13709. *Anomala binotata* Gyll. May 4, 1903. May 28, 1914, on shore at Ward's Point.
13741. *Pachystethus lucicola* Fab. June, July.
13742. *Pachystethus oblivia* Horn. June.
13747. *Strigoderma arboricola* Fab. June, July.
13750. *Strigodermella pygmæa* Fab. July.
13755. *Pelidnota punctata* Linn. June, July, Aug.
13769. *Cotalpa lanigera* Linn. May, June, July.
13801. *Ochrosidia immaculata* Oliv. June, July, Aug.
13803. *Ochrosidia villosa* Burm. Casey, Mem., VI, 1915, p. 147.
13829. *Dyscinetus trachypygus* Burm. April, May, June, July.
13834. *Ligyrodes relictus* Say. May, July, Aug., Sept. One found on sidewalk, Oct. 5, 1918.
13843. *Ligyrys gibbosus* DeG. May, June, July, Aug.
13878. *Aphonus castaneus* Melsh. July.
13902. *Xyloryctes satyrus* Fab. June, July, August.
13931. *Cotinus nitida* Linn. July, Aug. Walter C. Kerr reported a swarm of this species about a bed of cannas on Dongan Hills, July 7, 1900. See Pro. Nat. Sci. Ass'n, VIII, 19; June 8, 1901. A second swarm was observed

on Dongan Hills, July 11, 1922, and reported upon at the meeting of the S. I. Nature Club, Jan. 26, 1923.

13937. *Euphoria fulgida* Fab.
 13938. *Euphoria herbacea* Oliv. May, July, Aug.; this species was not uncommon some years ago at Silver Lake.
 13940. *Euphoria inda* Linn. March, April, May, June, Aug., Sept.; sometimes attracted to sap on birch stumps.
 13964. *Stephanucha arcata* Fab. Sept.
 14010. *Osmoderma scabra* Beauv. June, July, August.
 14012. *Osmoderma eremicola* Knoch. July, August.
 14013. *Gnorimella maculosa* Knoch. Four specimens have been found in May and June on Fort Hill and at St. George; also one at West New Brighton. Ft. Wadsworth, May 22, 1918, and Richmond, May 23, 1919 (E. J. Burns).
 14016. *Trichiotinus piger* Fab. June, July.
 14025. *Trichiotinus affinis* G. & P. June, July, August.
 14030. *Valgus squamiger* Beauv. Four found in decayed log, April 9, 1905; also found in May and June.

FAMILY LUCANIDÆ

14034. *Pseudolucanus capreolus* L. (*dama* Fab.). June, July, Aug.; most common in July.
 14039. *Dorcus parallelus* Say. May, June.
 14041. *Platycerus quercus* Web.
 14058. *Ceruchus piceus* Web. July.

FAMILY PASSALIDÆ

14064. *Passalus cornutus* Fab. In decaying stumps and logs throughout the winter and spring. Recently matured specimens sometimes found in December. The eggs have been collected at Ft. Lee, N. J., June 24.

FAMILY CERAMBYCIDÆ

14067. *Parandra brunnea* Fab. August, September.

14081. *Derobrachus brunneus* Forst. July, Aug. The larva lives in decaying logs of hardwood and conifers in contact with the ground; the imago is attracted by light.
14084. *Prionus laticollis* Druy. July, Aug. The larval period is from one to three or more years, and is passed in a variety of hardwoods, chiefly oak, poplar, and chestnut. The larva has also been found in roots of ash, blackberry, and grape.
14098. *Distenia undata* Fab. Two specimens have been taken, one at New Brighton on a grape vine. Hickory is said to be the food-plant.
14099. *Smodicum cucujiforme* Say. Has been found under oak bark; beech and hackberry have also been recorded as food-plants.
14107. *Asemum mæstum* Hald. Clove Valley, May 31 (Grossbeck); also in June. Larva in pine and spruce; the beetle is scarce on Staten Island.
14132. *Criocephalus agrestis* Kirby. June 28, 1894. The larva of this species also lives on pine and spruce and is scarce on Staten Island.
14146. *Ceme rigida* Say. July; bred from cedar.
14168. *Tessaropa tenuipes* Hald. June 1, 1890, from terminal twigs of ash, Jewett Ave., Port Richmond.
14181. *Chion cinctus* Dru. Hickory, oak, plum, and apple are given as food-plants by various authors.
14199. *Romaleum rufulum* Hald. July, Aug.; one was found on Peggie's Point, Mariners' Harbor. Ft. Wadsworth, July 24, 1918 (E. J. Burns). Watchogue, July 16, 1922. Larva in oak.
14211. *Hypermallus villosus* Fab. May, June, Aug. Makes a squeaking noise. The "oak pruner" of economic literature; but the record foods include a great variety of hardwoods.
14220. *Elaphidion mucronatum* Say. June, July, Aug. Larva bores in various trees and in large grape vines (Riley).

14240. *Anoplium cinerascens* Lec.
14263. *Pseudibidion unicolor* Rand. Egypt Island back of Midland Beach, June 29, 1906. Larva in oak, redbud, plum (Smith).
14268. *Heterachthes ebenus* Newn. June.
14271. *Heterachthes quadrimaculatus* Fab. June, July, Egypt Island, Long Neck, Clove Valley; hatched from hickory, also beaten from hickory branches.
14286. *Obrium maculatum* Oliv. (*pallidum* Say). July, on oak. Also reported from hickory and redbud.
14291. *Obrium rufulum* Gahan. July, on privet. Found on oak by E. A. Bischoff.
14298. *Rhagium lineatum* Oliv. April, Nov., under bark of white pine, hibernating as imago in nest of shredded wood. Attacks also spruce and fir (Ins. Life, ii, 190).
14313. *Centrodera picta* Hald. Clove Valley, June 7, 1913; flew to light (Grossbeck). On hickory (Bischoff).
14411. *Gaurotes cyanipennis* Say. June, July, on chestnut; often common on flowers of Liriodendron. Hamilton and Wickham both give butternut as food-plant, but only four or five of these trees are to be found on the Island, principally at Sandy Brook near Rossville.
14426. *Judolia cordifera* Oliv. June, July; Clove Valley, on flowers of New Jersey tea.
14438. *Brachyleptura rubrica* Say. June, July; Richmond, Clove Valley, on flowers of New Jersey tea. Breeds in beech (Smith).
14441. *Brachyleptura vagans* Oliv. Three bred from branch of pitch pine. On flowers.
14457. *Parallelina nana* Newn. var. *haematites* Newn. May, on flowers.
14465. *Strongalepta lineola* Say. May, June, on flowers.
14466. *Strongalepta pubera* Say. May, June, on flowers.
14469. *Strongalepta vittata* Germ. May, June, on flowers.
14493. *Xestoleptura octonotata* Say. June 19, 1892, on flowers, not rare.

14508. *Strophiona nitens* Forst. May, June, on flowers. The larva breeds in oak stumps according to Dr. Hamilton.
14514. *Leptura emarginata* Fab. North side of Silver Lake, larvæ in red oak (Joutel).
15525. *Leptura proxima* Say. On flowers. Reared from maple (Ins. Life, iv, 65).
14532. *Leptura mutabilis* Newn. June; hatched from blue beech and dogwood. On flowers.
14543. *Typocerus velutina* Oliv. June, July, Aug.; found on wild rose blossoms, also attracted to light.
14548. *Typocerus lugubris* Say. June, July.
14553. *Ophistomis famelica* Newn. June, July. On flowers.
14554. *Ophistomis acuminata* Oliv. June. On flowers.
14556. *Ophistomis luteicornis* Fab. June, July, Aug.; found on flowers; wild rose, New Jersey tea, etc.
14573. *Encyclops cærulea* Say. May 30, 1890, on the flowers of panicked dogwood near Old Town Road, in considerable numbers; not found since.
14574. *Desmocerus palliatus* Forst. Watchogue, July 17, 1909, in woods. West New Brighton, July 3, 1922, in C. W. L.'s garden. Breeds in elder.
14584. *Molorchus bimaculatus* Say. May; bred from dogwood. Often found on flowers of panicked dogwood.
14613. *Hylotrupes bajulus* Linn. Clove Valley. Fir, pine, spruce, hemlock, juniper, arbor vitæ have been given as its food-plants.
14614. *Anacomis lignea* Fab. Richmond, March 29, 1903, common on a recently felled cedar; also in April. The larva in cedar, which tree is dying out on the Island.
14620. *Callidium antennatum* Newn. St. George, April 5, 1913, attracted by light; also June 9, three specimens. Larva lives in pine.
14630. *Phymatodes amœnus* Say. May, June. Larva in dead grape vines.
14631. *Phymatodes lengi* Joutel. June.

14634. *Phymatodes testaceus* L. June. Larvæ in oak logs, working under the bark. In Ocean County, N. J., the woodmen know them as "bark-slipppers."
- 14634a. *Phymatodes variabilis* L. With the last.
14640. *Phymatodes dimidiatus* Kirby. Larva bores in oak (Ins. Life, iv, 65).
14646. *Phymatodes varius* Fab. Larva bores in oak (Ins. Life, iv, 65).
14655. *Phymatodes lividus* Rossi. An introduced species, found on Staten Island according to Joutel.
14670. *Cyllene caryæ* Gahan (*picta* Horn). May; several from fire-wood in early spring. Larva in hickory.
14671. *Cyllene robinæ* Forst. Aug., Sept., Oct. Larva breeds in locust; adults common on goldenrod.
14672. *Arhopalus fulminans* Fab. June, July. Larva in chestnut; Dr. Riley gives oak also.
14679. *Xylotrechus colonus* Fab. June, July, Aug., most common in June. Larva in many hardwood trees.
14683. *Xylotrechus quadrimaculatus* Hald. July, near Silver Lake (Schaeffer). On alder (Smith).
14684. *Xylotrechus aceris* Fisher. 146 Stuyvesant Pl., July, 1921.
14717. *Neoclytus acuminatus* Fab. (*erythrocephalus* Fab.). May, June, July. Very common on various hardwoods.
14741. *Cyrtophorus verrucosus* Oliv. June 26, Clove Valley. Scarce on hardwoods.
14745. *Eudercus picipes* Fab. June. Common on flowers. Said to breed in chestnut, linden, beech (Smith).
14750. *Tilloclytus geminatus* Hald. May, June; Great Kills, Clove Valley. Bred from sumac (Ulke). Found on oak.
14795. *Purpuricenus humeralis* Fab. June. On oak.
14857. *Batyleoma suturale* Say. July and Aug., on flowers. July 6, 1922, near Rockland Ave.
14893. *Cyrtinus pygmaeus* Hald. June. Beaten from oak; said

to occur also on locust, hickory, and the ash-leaved maple.

14894. *Psenocerus supernotatus* Say. May, June, July; many on dead sweet gum at Great Kills, May 20, 1915. Injurious to currant and gooseberry stems.
14895. *Monochamus titillator* Fab. June, July, Aug. On pine.
14901. *Monochamus notatus* Dru. (*confusor* Kirby). New Brighton. Aug. 5, 1896, flew in a window. On pine.
14904. *Monochamus scutellatus* Say. June 22, 1905 (L. Parsons); Ft. Wadsworth (Fulda). On pine.
14909. *Dorcaschema alternatum* Say. June, July, Aug. Common at times on the osage orange trees near Richmond. Larvæ live in the roots of mulberry (Riley).
14911. *Hæmæmis cinerea* Oliv. July. Has been bred from osage orange, mulberry, hickory (Hamilton).
14915. *Hammoderus tessellatus* Hald. In *Entomologica Americana*, vol. V, p. 40, M. L. Linell records this species as taken on the Island in July, 1885. "We took it by beating over the umbrella the dense 10 inch long shoots on freshly cut oak stumps. Only one pair and three single females were secured."
14917. *Goes tigrinus* DeG. Flew in a window, 146 Stuyvesant Place, New Brighton, July 5, 1908; West New Brighton, July 20 (Benedict), and July 9 (Achilles). On oak.
14918. *Goes pulcher* Hald. August 8, 1886 (A. C. Weeks); July 12, 1896 (E. Shoemaker); and one without date. On hickory (Smith).
14919. *Goes pulverulentus* Hald. July. On oak, ironwood, hornbeam, beech, wild cherry (Wickham).
14932. *Ægomorphus decipiens* Hald. June; also hatched from hickory. Reared from maple (Ins. Life, iv, 65).
14943. *Leptostylus aculifer* Say. Breeds in hickory, tulip oak, apple, sycamore, osage orange, according to Smith and Wickham.
14957. *Leptostylus biustus* Lec.

14960. *Astylopsis macula* Say. June, July. Commonly found by beating hickory, beech, chestnut, maple, etc.
14961. *Astylopsis guttata* Say (*commixta* Hald.). June, July. On black locust (Schwarz, Proc. Ent. Soc. Wash., ii, 74).
14968. *Leiopus variegatus* Hald. June, Aug. On locust, box-elder, hackberry.
14971. *Leiopus crassulus* Lec. July.
14975. *Leiopus punctatus* Hald.
14976. *Leiopus fascicularis* Harr. On black locust (Schwarz, Proc. Ent. Soc. Wash., ii, 74).
14985. *Leiopus alpha* Say. June, July, Aug., hatched from sumach, *Rhus copalina* (Davis); bores in dead apple twigs (Riley).
14995. *Lepturges symmetricus* Hald. June. On hackberry.
14998. *Lepturges signatus* Lec. June, July, Aug. On sumach (Wickham); beech and redbud.
15001. *Lepturges querci* Fitch. June, July, Aug.; hatched from hickory.
15003. *Lepturges facetus* Say. On hickory (Hamilton); on juniper (Wickham).
15011. *Hyperplatys nigrella* Hald.
15016. *Hyperplatys aspersa* Say. June, July, Sept.; hatched from hickory. Chestnut, poplar, apple, currant also given as food-plants.
15021. *Urographis fasciata* DeG. June, July, Aug., Sept.; from hickory and oak. Chestnut and maple have also been given as food-plants.
15037. *Dectes spinosus* Say. Breeds in the stems of ragweed (Smith), and possibly also of *Xanthium*.
15056. *Pogonocherus mixtus* Hald. June. On dead branches of swamp willow (Wickham).
15067. *Ecyrus dasycerus* Say. June. On hickory, tulip, locust, also reported from redbud.

15070. *Eupogonius vestitus* Say. July. On dogwood, hickory, walnut, chestnut.
15088. *Oncideres cingulatus* Say. Usually in the fall; branches of hickory girdled by this insect have been observed very often on the Island.
15098. *Hippopsis lemniscata* Fab. Richmond, July 15, 1919 (E. J. Burns).
15109. *Saperda obliqua* Say. July. The galls caused by the larvæ are not uncommon near the roots of many alder bushes in the Clove Valley.
15112. *Saperda candida* Fab. June, July, Aug. Found on the wild *Pyrus* bushes, on *Amelanchier* and *Cratægus*, as well as on the apple. Known as the round-headed apple borer.
15114. *Saperda tridentata* Oliv. May, June. On elm.
15116. *Saperda discoidea* Fab. July, Aug., Sept.; Long Neck, Clove Valley, South Shore, on hickory and walnut.
15119. *Saperda lateralis* Fab. June; four taken on hickory.
15121. *Saperda puncticollis* Say. June, on flowers of grape and poison ivy. Larva lives in *Ampelopsis* (Joutel).
15123. *Saperda concolor* Lec. var. *unicolor* Felt and Joutel. On dwarf willow.
15138. *Oberea tripunctata* Swed. June, July.
15148. *Oberea bimaculata* Oliv. var. *tripunctata* Fab. June, July. Injurious to raspberry and blackberry canes.
15153. *Oberea ruficollis* Fab. June. On sumach and sassafras (Smith).
15154. *Oberea gracilis* Fab.
15162. *Tetraopes canteriator* Drap. June, July.
15170. *Tetraopes tetraophthalmus* Forst. June, July. Larva in roots of milkweed.

FAMILY CHRYSOMELIDÆ

15198. *Donacia cincticornis* Newm. June; on white water lily.

- *Donacia cincticornis* var. *rufipennis* Lac. Britton's Upper Pond.
15199. *Donacia palmata* Oliv. June; on yellow pond-lily.
15200. *Donacia texana* Cr. Variety.
15201. *Donacia rufescens* Lac. Silver Lake (Schaeffer).
15202. *Donacia piscatrix* Lac. June; on yellow pond-lily.
15203. *Donacia subtilis* Kunze. June, July; on *Sparganium*.
15206. *Donacia rugosa* Lec. July; on pickerel-weed.
15209. *Donacia æqualis* Say. Clove Valley, July, swept from subaquatic plants (C. W. L., Jr.).
15212. *Donacia bi-imprensa* Melsh. (*torosa* Lec.). June.
15217. *Donacia flavipes* Kirby. June.
15218. *Donacia rufa* Say (*tuberculata* Lac.). On *Sagittaria*, July, Aug.
15219. *Orsodachne atra* Ahr. April; on early blossoms.
15223. *Syneta ferruginea* Germ.
15230. *Zeugophora consanguinea* Cr. July.
15233. *Zeugophora varians* Crotch. Watchogue, May 26.
15234. *Crioceris asparagi* Linn. May, June, Aug. This and the following species often common on asparagus.
15235. *Crioceris duodecimpunctata* Linn. June, Sept. When held in the hand this beetle stridulates. April 4, sifting leaves in garden, West New Brighton.
15239. *Lema brunnicollis* Lec. June. Two found on thistle.
15253. *Lema trilineata* Oliv. July. April 4, sifting leaves in garden, West New Brighton. The "old fashioned potato beetle."
15262. *Antipus laticlavus* Forst. June 18, 1893, on clammy locust.
15297. *Chlamys gibbosa* Fab. April, May, June. On blackberry, the larva living within a case.
15306. *Exema conspersa* Mann. June, Aug., Oct.
15312. *Pachybrachys pubescens* Oliv. Tottenville, June 14.
15369. *Pachybrachys femoratus* Oliv. July, Aug.
15432. *Pachybrachys tridens* Melsh. June, on poison ivy.
15451. *Pachybrachys othonus* Say. Watchogue, July 18.

15455. *Pachybrachys carbonarius* Hald. Tottenville, June.
15462. *Pachybrachys luridus* Fab. June, July.
15472. *Monachulus ater* Hald. June.
15473. *Monachulus saponatus* Fab. June, July, Aug.
15479. *Cryptocephalus notatus* Fab. June. On oak.
15480. *Cryptocephalus quadruplex* Newn. May, June, July.
15480a. *Cryptocephalus quadriguttulus* Suffr. June.
15495. *Cryptocephalus venustus* Fab. May, June, July, Aug.;
var. *simplex*, June, July, Aug.; var. *hamatus* Melsh. July
(C. W. L., Jr.).
15500. *Cryptocephalus calidus* Suffr. Three specimens collected.
Ward's Hill, July 16, 1916.
15507. *Cryptocephalus mutabilis* Melsh. Richmond, Aug. 10,
1912, two on hazel.
15516. *Cryptocephalus tinctus* Lec. Sept.; beaten from hickory.
15518. *Cryptocephalus striatulus* Lec. June; July (C. W. L.,
Jr.).
15521. *Diachus auratus* Fab. June, July.
15530. *Bassareus brunnipes* Oliv. July. On alder and *Clethra*.
15534. *Bassareus mammifer* Newn. June; var. *pretiosus* Melsh.
July. On hickory, hazel, and New Jersey tea.
15536. *Bassareus lituratus* Fab. var. *recurvus* Say. June, July.
15544. *Chrysodina globosa* Say. June, Aug., Sept.
15545. *Nodonota tristis* Oliv. July (C. W. L., Jr.). Common
on the leaves of various plants.
15549. *Nodonota puncticollis* Say. June, July.
15555. *Colaspis brunnea* Fab. var. *flavida* Say. July, Aug.
Larva on roots of grape; adults on foliage of many
plants. Sometimes at light.
15559. *Colaspis favosa* Say. June.
15563. *Rhabdopterus picipes* Oliv. June, July, Aug. On myrtle,
grape and basswood.
15567. *Graphops pubescens* Melsh. At roots of evening prim-
rose.
15569. *Graphops marcassitus* Cr. May.

15573. *Xanthonia decemnotata* Say.
15574. *Xanthonia villosula* Melsh. June, July. On oak and hazel.
15577. *Fidia viticida* Walsh. July. On grape.
15604. *Adoxus obscurus* L. Seashore, June..
15605. *Tymnes tricolor* Fab. June, July. On chestnut, hickory, etc.
15607. *Tymnes metasternalis* Cr. On *Cratægus*.
15613. *Glyptoscelis pubescens* Fab. June 30, Clove Valley, on pitch pine.
15626. *Paria canella* Fab. March, May, June, July, Aug. The following numerous varieties have also been found: *aterima* Fab.; *gilvipes* Horn; *thoracica* Melsh. Feb.; *4-notata* Say, May; *sellata* Horn; *vittata* Horn, September; *4-guttata* Lec., April 30, and *pumila* Lec., March and July.
15627. *Chrysochus auratus* Fab. June, July, Aug. On dogbane.
15636. *Prasocuris vittata* Oliv. June.
15639. *Labidomera clivicollis* Kirby. May, June, July, Aug. On milkweed.
15648. *Leptinotarsa decemlineata* Say. May, June, July, Aug., Sept. The following is from *Psyche*, vol. 1, p. 104: "On May 25, 1875, I captured a specimen of *Chrysomela 10-lineata* Say, or Colorado Potato-beetle, at Bay Ridge, L. I., and a few days afterward received a number from a friend, taken near Fort Hamilton, L. I." John Akhurst, Brooklyn, N. Y., June 4, 1875.
15655. *Zygogramma suturalis* Fab. May, June, Aug.; also var. *casta* Rogers. On ragweed, etc.
15664. *Calligrapha lunata* Fab. On rose.
15665. *Calligrapha similis* Rog. May, June, July, Aug. On ragweed.
15669. *Calligrapha elegans* Oliv. April, May, June, July, Aug., Sept. On *Bidens* and ragweed.

15671. *Calligrapha scalaris* Lec. Richmond, October 20. On elm.
15675. *Calligrapha amelia* Knab. Proceedings Ento. Soc. Wash., vol. XI, 1909, p. 86. Feeds on *Alnus rugosa*, and "Staten Island, New York" is one of the localities given by the author.
15693. *Plagioderà versicolora* Laich. An introduced species. Great Kills, July 24; Clove Valley, Aug. 2, 1911, on willow; Bull's Head, Oct. 9, 1915, many under bark of willow.
15701. *Gastroidea polygóni* Linn. April, May, June, July, Aug.
15703. *Gastroidea cyanea* Melsh. May, June. On *Rumex*.
15708. *Lina interrupta* Fab. June 5, 1914, Tottenville; on the shore. Occurs on willow and poplar. This replaces *M. lapponica* Linn. of the New Jersey list, a European species.
15709. *Lina tremulæ* Fab. Watchogue, July 2, 1916, on willow.
15710. *Lina scripta* Fab. June.
15724. *Trirhabda tomentosa* Linn. June, July, Aug., Sept., Oct.; often on the seaside goldenrod (*Solidago sempervirens*).
15726. *Trirhabda virgata* Lec.
15727. *Trirhabda canadensis* Kirby. August. On goldenrod.
15744. *Galerucella americana* Fab. June, July, Aug., Oct. On goldenrod.
15746. *Galerucella cavicollis* Lec. June. On wild cherry.
15747. *Galerucella rufosanguinea* Say. April, May, June, Aug. On *Azalea*.
15749. *Galerucella notulata* Fab. On ragweed.
15750. *Galerucella notata* Fab. Feb., July. On *Eupatorium*.
15751. *Galerucella nymphææ* Linn. May, June, July; larvæ and mature insects on yellow pond-lily.
15754. *Galerucella xanthomelæna* Schrank. The elm tree beetle. April, May, June, July, Aug., Sept. A great many were found on one occasion hibernating in a disused chimney in West New Brighton. Less common in recent years.

15755. *Monoxia puncticollis* Say. June, July, Aug.; Nov. 6, 1909, on salt meadow.
15769. *Diabrotica duodecimpunctata* Fab. April, Aug., Sept., Oct., Dec. Larva in roots of corn and grasses.
15782. *Diabrotica vittata* Fab. April, May, June, Aug., Sept. The "Striped Cucumber-beetle."
15792. *Phyllobrotica discoidea* Fab. June, July, Aug.
15823. *Luperodes meraca* Say. On wild rose and many other plants.
15824. *Luperodes cyanellus* Lec.
15854. *Cerotoma trifurcata* Forst. May, June, July, Aug. Common on peas, beans, etc.
15858. *Blepharida rhois* Forst. May, June, July, Aug., Sept., Oct.; May 26, 1914, two on *Rhus copallina* at Great Kills.
15867. *Ædionychis thoracica* Fab. April, May, July.
- 15868. *Ædionychis vians* Ill. May, June, November.
15873. *Ædionychis fimbriata* Forst. Tottenville, June.
15877. *Ædionychis miniata* Fab. June.
15889. *Ædionychis quercata* Fab. April, May, June.
15890. *Ædionychis scalaris* Melsh. Watchogue, July 17, 1909.
15895. *Disonycha pennsylvanica* Ill. April, May, June, July, Aug.; May 22, 1887, plentiful on yellow pond-lily; also on pickerel-weed.
15898. *Disonycha caroliniana* Fab. June. On purslane.
15906. *Disonycha triangularis* Say. On *Chenopodium* and *Amaranthus*.
15907. *Disonycha xanthomelæna* Dalm. March, April, Nov., Dec. On *Chenopodium*, *Stellaria*, etc.
15911. *Disonycha collata* Fab. June.
15917. *Haltica chalybea* Ill. April, May, June, Sept.; April 15, 1910, on birch sap. The "Grape Flea-beetle."
15920. *Haltica ignita* Ill. May, June, Aug., Sept.; on rose bushes.
15942. *Haltica marevagans* Horn. June. On evening primrose.

15949. *Haltica fuscoænea* Melsh. June. On evening primrose.
15950. *Haltica knabi* Blatch. Staten Island, June (H. C. Fall det.).
15955. *Haltica rufa* Ill.
15968. *Chalcoides helxines* Linn. Feb., May, June, Oct.; often on willow.
15969. *Crepidodera erythropus* Melsh. June. On honey-locust, etc.
15974. *Crepidodera atriventris* Melsh. June.
15982. *Epitrix cucumeris* Harr. March, May, June, July, Aug. The "Cucumber Flea-beetle," but also found on other plants.
15988. *Orthaltica copalina* Fab. June. On sumach.
15993. *Mantura floridana* Cr. March (Pollard), April (Nicolay), June, July; Bull's Head, December.
16001. *Chætocnema denticulata* Ill. Ward's Point, June and Sept. 18, 1914. Dug from sand on latter date.
16002. *Chætocnema cribrifrons* Lec. Tottenville, July 10, 1915 (Woodruff).
16013. *Chætocnema parcepunctata* Cr. July.
16014. *Chætocnema pulicaria* Melsh. July; Tottenville, Aug. 27, Nov.
16016. *Chætocnema confinis* Cr. July (C. W. L., Jr.). Single specimen; and may be *quadricollis* Sz.
16022. *Systema hudsonias* Forst. June, July.
16023½. *Systema frontalis* Fab. July, Aug. On *Polygonum* and *Chenopodium*.
16029. *Systema marginalis* Ill. June, July, Aug., Sept.
16034. *Longitarsus turbatus* Horn.
16047. *Longitarsus testaceus* Melsh. June.
16049. *Longitarsus melanurus* Melsh.
16051. *Longitarsus insolens* Horn. July (C. W. L., Jr.).
16065. *Phyllotreta sinuata* Steph. June, July.
16066. *Phyllotreta vittata* Fab. June, August. Common on cabbage and other Cruciferæ.

16074. *Phyllotreta bipustulata* Fab. Seashore, June 5, 1913.
16076. *Phyllotreta chalybeipennis* Cr. August 4, 1912, seashore on *Cakile*; also June 5, 1892.
16081. *Phyllotreta picta* Say. On hickory sprouts.
16086. *Dibolia borealis* Chev. Jan., April, May, June, Aug., Sept. Lives on plantain.
16089. *Psylliodes punctulata* Melsh. March.
16094. *Stenispa metallica* Fab. May, June. In swampy places.
16105. *Anoplitus inaequalis* Web. (? *nervosus* Panz). May, June, July, Sept. On locust.
16109. *Chalepus bicolor* Oliv. June, July.
16111. *Chalepus scapularis* Oliv. May, June, July, Aug.
16113. *Chalepus dorsalis* Thunb. May, June, Aug.; generally on locust; larva mines the leaves. July 16, 1922, larvæ and pupæ in locust leaves; July 29, adults.
16114. *Chalepus horni* Smith. Richmond (Roberts). On *Tephrosia virginica*.
16116. *Baliosus ruber* Web. April 27 (Pollard), June, July, Oct. On locust and basswood.
16126. *Uroplata porcata* Melsh. June, July.
16129. *Microrhopala vittata* Fab. March, April, May, June, July, Aug. Larva mines in leaves of goldenrod.
16133. *Microrhopala excavata* Oliv. May.
16139. *Chelymorpha cassidea* Fab. April, May, June, July, Aug.; common on young elder, May 23; on trumpet vine, Aug. 10.
16152. *Chirida guttata* Oliv. May, June, July, Aug., Sept. April 4, sifting leaves in garden, West New Brighton.
16155. *Deloyala clavata* Fab. June, July; found on nightshade (*Solanum dulcamara*), also on *Physalis*.
16157. *Metriorhina bicolor* Fab. (*aurichalcea* Fab.). March, June, July; found hibernating among *Iris* roots in garden. April 4, sifting leaves in garden, West New Brighton. Lives on bindweed, the larva with pack on back, called

"peddlers." This and two preceding are brilliantly colored in life and called "gold bugs."

FAMILY MYLABRIDÆ (BRUCHIDÆ)

16165. *Mylabris (Bruchus) pisorum* Linn. The common "pea-weevil."
 16175. *Mylabris discoideus* Say. Tottenville, June 19, 1917.
 16190. *Mylabris nigrinus* Horn.
 16218. *Mylabris alboscuteatus* Horn. June, August, September.
 16221. *Mylabris obtectus* Say. The "bean-weevil."
 16222. *Mylabris hibisci* Oliv. Often common in the seeds of the marsh mallow in September.
 16231. *Mylabris calvus* Horn? Buck's Hollow, June, 1918.
 16236. *Mylabris musculus* Say. June.
 16246. *Spermophagus hoffmannseggii* Gyll. Nov., from seeds of honey locust.

FAMILY BRENTIDÆ

16256. *Eupsalis minuta* Dru. May, June, July, Aug., Sept. Sometimes under oak bark. Poplar, beech, chestnut, and maple are also mentioned.

FAMILY PLATYSTOMIDÆ (ANTHRIBIDÆ)

16263. *Ormiscus saltator* Lec. June. Breeds in dead wood of deciduous trees, often found in hickory on Staten Island.
 16275. *Eusphyrus walshii* Lec. June, on hickory.
 16279. *Eurymycter fasciatus* Oliv. March. Occurs on fungus growing on dead beech.
 16299. *Euparius marmoreus* Oliv. April, May, July. Taken mainly on woody fungus on oak logs and stumps.
 16303. *Brachytarsus alternatus* Say. Sept. 4, 1893, on *Helenium*. Bred from the fungus *Cystopus*, parasitic on dodder in Ohio; also from stems of Composites (*Sideranthus*) in Tex.

16304. *Brachytarsus sticticus* Boh. June. Breeds in the smut of corn and wheat.
 16305. *Brachytarsus tomentosus* Say. June. Sometimes abundant on ragweed.
 16315. *Anthribulus rotundatus* Lec. Staten Island (Thompson). Occurs in swampy meadows.

FAMILY BELIDÆ

16324. *Ithycerus noveboracensis* Forst. May, June, July; common in Clove Valley, June 19, 1915, on trunks of oak trees.

FAMILY CURCULIONIDÆ

16331. *Auletes ater* Lec. Occurs on sweet-fern (*Comptonia*) and bayberry.
 16343. *Eugnamptus collaris* Fab. Clove Valley, June, July. Var. *nigripes* Melsh. Clove Valley, June 26; Watchogue, July 17. Occurs on hickory.
 16347. *Eugnamptus angustatus* Hbst. June, July, Aug. On leaves of hickory.
 16348. *Rhynchites bicolor* Fab. June. On roses, the larvæ in the hips.
 16354. *Rhynchites hirtus* Fab. June 26, Clove Valley; July. On black-jack oak.
 16361. *Rhynchites æratus* Say. July. On oak.
 16365. *Attelabus analis* Ill. July. On oak. The larvæ in this genus roll leaves into compact thimble-shaped masses.
 16366. *Attelabus nigripes* Lec. May, June, July, Aug. On *Rhus copalina*.
Attelabus bipustulatus Fab., which also rolls oak leaves, and *Attelabus rhois* Boh., which rolls leaves of hazel and alder, have not yet been found on the Island.
 16370. *Pterocolus ovatus* Fab. August. On oak.
 16382. *Apion melanarium* Gerst. June, July. Abundant but food-plant unknown.

16431. *Apion griseum* Sm. Nov. 20, 1909, many found in pods of *Phaseolus polystachyus* growing on Richmond Hill.
16441. *Apion rostrum* Say. June, July, Aug., Sept., Oct.; on *Baptisia*.
16443. *Apion nigrum* Hbst. July. Breeds in seeds of black locust (*Robinia pseudacacia*).
16457. *Apion segnipēs* Say. Watchogue, Sept. 15, 1914, in pods of *Tephrosia*.
16486. *Apion puritanum* Fall. June. Occurs on *Viburnum*.
16488. *Apion herculanum* Sm. On witch-hazel according to Mr. Bischoff.
16499. *Phyxeles rigidus* Say. Jan., April, July, Aug.
16576. *Panscopus erinaceus* Say. July.
16596. *Tanymecus confertus* Gyll. June, July. In stems of *Ambrosia trifida* (Hamilton). Polyphagous (Riley).
16605. *Pandelestus hilaris* Hbst. June, July, Aug. Abundant on oak, in the wood of which it breeds.
16635. *Hormorus undulatus* Uhler. June, Aug. Adults on Solomon's Seal.
16641. *Strophosoma coryli* Fab. March.
16659. *Pantomorus fulleri* Horn. Fuller's rose weevil, the larva feeding on the roots, the adult on the leaves.
16672. *Barypeithes pellucidus* Boh. "This European weevil occurs on Long Island and Staten Island." W. D. Pierce, On the Biologies of the Rhynchophora of N. A., 1907. Nov. 1, 1887 (Weeks), Ent. Am., iii, pp. 180 and 188. "Taken abundantly on Staten Island. Common around Paris at the base of the cultivated strawberry." Dr. John Hamilton (Trans. Am. Ento. Soc., XXI, 1894, p. 402). Notwithstanding these references dating back a number of years, we have never found it.
16677. *Brachyrhinus sulcatus* Fab. July, Nov. Larva feeds on roots of horticultural plants.
16678. *Brachyrhinus ovatus* Linn. July, Aug. The strawberry "crown-girdler," sometimes injurious. It has also been

- accused of biting campers at night (Jas. Fletcher. Can. Ento., XXXI, 15).
16697. *Trachyphlæus davisi* Blatch. Seashore near Fort Wadsworth, April 27, 1911. Staten Island is the type locality.
16721. *Aphrastus tæniatus* Gyll. Breeds in the roots of various coarse grasses; often abundant.
16727. *Sitona flavescens* Marsh. June, Sept. Larva feeds on clover roots.
16728. *Sitona hispidulus* Fab. April, May, Aug., Dec. October, under leaves in garden. Larva feeds on clover roots.
16754. *Hypera punctata* Fab. July, Aug., Sept. October, under leaves in garden. Larva feeds on tender stems of clover.
16757. *Phytonomus comptus* Say. April, May. Larva feeds on leaves of *Polygonum* in wet places and pupates in a delicate cocoon.
16764. *Phytonomus meles* Fab. Tottenville, June 14, 1912. Larva feeds on clover.
16765. *Phytonomus nigrirostris* Fab. April, May, June. Larva feeds on clover.
16773. *Listronotus sordidus* Gyll. Aug. 14, 1908. The larvæ of *Listronotus* feed on various subaquatic plants.
16778. *Listronotus inæqualipennis* Boh. Clove Valley, May.
16783. *Listronotus appendiculatus* Boh. May, July, Aug. 19, 1903 (Woodruff).
16790. *Listronotus latiusculus* Boh. July. Larva on *Sagittaria*.
16801. *Hyperodes solutus* Boh. Clove Valley, August 2, 1911. On arrow-arum and possibly other subaquatic plants.
16803. *Hyperodes indistinctus* Dietz. August 16, 23, 1913, on *Sagittaria* (Woodruff).
16845. *Pissodes strobi* Peck. Tottenville, July 10, 1915. White pine weevil, sometimes doing great damage.
16873. *Hylobius pales* Boh. Clove Valley, April 30; Long Neck, Sept. 21, 1907. On pine.

16897. *Dorytomus parvicollis* Casey. The species of *Dorytomus* occur on willow and aspen.
16931. *Pachyphanes amænus* Say. Aug.; Ward's Point, in meadow, Sept. 18, 1914. Occurs on dodder, ragweed, sneezeweed and horsemint.
17014. *Endalus limatulus* Gyll. May.
17019. *Endalus ovalis* Lec. Buck's Hollow. June, 1918.
17021. *Tanysphyrus lemnae* Fab. May 22, 1898. On duckweed (*Lemna*).
17022. *Onychylis nigrirostris* Boh. May; found on water plants, arrow-head, pickerel-weed, etc.
17029. *Lissorhoptrus simplex* Say. May; on salt meadows. The larva feeds on roots of palustral plants. The "rice water-weevil."
17118. *Otidocephalus myrmex* Hbst. June, July. The species of this genus occur on oak and have been bred from Cynipid galls thereon.
17121. *Otidocephalus chevrolatii* Horn.
17125. *Otidocephalus lævicollis* Horn.
17129. *Magdalis barbicornis* Latr. June. On elm.
17133. *Magdalis perforata* Horn. On pine.
17136. *Magdalis austera* Fall. July. On pine.
17147. *Magdalis pandura* Say. June. On elm, oak, walnut, etc.
17155. *Balaninus proboscoideus* Fab. The large chestnut weevil once common on the Island, but with the smaller chestnut weevil, probably near extinction by reason of the death of the trees.
17156. *Balaninus caryæ* Horn. Hickory-nut weevil.
17157. *Balaninus rectus* Say (*quercus* Horn). Aug., Sept. Acorn weevil.
17158. *Balaninus algonquinus* Casey. The smaller chestnut weevil.
17159. *Balaninus nasicus* Say. June, July, Aug., on oak.
17162. *Balaninus baculi* Chitt. An oak weevil; West New

Brighton, Sept. 4, 1915, several found at electric light.
Long Neck, Sept. 14, 1916.

17186. *Tachypterellus quadrigibbus* Say. May, June. Common on shadbush, thorns and fruit trees.
17189. *Anthonomus scutellaris* Lec. May 29, 1909, on beach plum; also May 7, male and female.
17202. *Anthonomus profundus* Lec. June. Lives in the buds of *Cratægus crus-galli*, developing within the fruit (Schwarz).
17217. *Anthonomus corvulus* Lec. June. Occurs on flowers of dogwood, *Prunus*, *Viburnum*, etc.
17219. *Anthonomus signatus* Say. The strawberry weevil. "In 1884 and 1885 it was injurious on Staten Island." Insect Life, V, p. 167, 1893 (F. H. Chittenden).
17236. *Anthonomus nigrinus* Boh. Breeds in the buds of horse-nettle (*Solanum carolinense*) and in those of potato.
17245. *Anthonomus scutellatus* Gyll. June, July, August.
17303. *Pseudanthonomus incipiens* Dietz. Staten Island (Bischoff). Beaten from flowers of tall blueberry, also laurel.
17335. *Elleschus ephippiatus* Say. May, June, July, on willow. Bred by Walsh from galls on willow.
17337. *Orchestes ephippiatus* Say. On crack-willow (*Salix fragilis*).
17339. *Orchestes niger* Horn. June.
17352. *Prionomerus calceatus* Say. June, July. Larvæ mine leaves of sassafras and tulip trees.
17353. *Piazorhinus scutellaris* Say. May, June. Found on oak and laurel.
17354. *Piazorhinus pictus* Lec. On oak.
17359. *Gymnetron tetrum* Fab. May, June; on mullein, the larvæ living in the seed pods.
17415. *Lixus musculus* Say. May, June. Bred from *Polygonum amphibium* by Kelicott.
17418. *Lixus concavus* Say. May, June; on stalks of dock in

which it breeds. The pupal cells are made in the stems just below the surface of the ground.

17443. *Læmosaccus plagiatus* Fab. June, July; March, 1881, from the oak gall *Callirhytis cornigera*.
17447. *Baris umbilicata* Lec. July, Aug. In low moist meadows.
17454. *Baris callida* Casey. Ward's Point, Sept. 18, 1914, in stems of *Xanthium*.
17505. *Baris scolopacea* Germ. Watchogue, July (C. W. L., Jr.).
17542. *Madarellus undulatus* Say. June, Aug., Sept. Breeds in woodbine where pupal cells of finely comminuted wood and bark are formed.
17562. *Pseudobaris nigrina* Say. Sept. In damp meadows.
17566. *Trichobaris trinotata* Say. Aug. 20, 1920, in stem of *Solanum*.
17580. *Gercæus picumnus* Hbst. June, Sept. Infests the stems of grasses.
17597. *Odontocorynus scutellum-album* Say. June, July, Aug.
17646. *Limnobaris rectirostris* Lec. Buck's Hollow, June 1918, on sedges.
17662. *Zaglyptus sulcatus* Lec. July.
17699. *Gelus oculatus* Say.
17719. *Cylindrocopturus quercus* Say. June, July, Aug. Adult on oak; larva in stems near the root of coarse weeds.
17721. *Cylindrocopturus longulus* Lec. July; South Shore and at Watchogue. Adult on oak.
17726. *Acoptus suturalis* Lec. May, June, July (Joutel). On beech, hop-hornbeam and hickory.
17728. *Mononychus vulpeculus* Fab. May, June; breeds in the seed pods of *Iris*, the blue flag.
17729. *Craponius inæqualis* Say. June.
17736. *Acanthoscelis acephalus* Say. June. On evening primrose.
17745. *Auleutes ater* Dietz. July.
17753. *Auleutes nebulosus* Lec. July.

17764. *Ceutorhynchus rapæ* Gyll. "Cabbage curculio." Also on hedge-mustard, peppergrass, etc.
17781. *Ceutorhynchus sulcipennis* Lec.
17797. *Ceutorhynchus neglectus* Blatch. Clove Valley, July, on *Polygonum*. Old Place, June 28, 1918, many on flowers of *Brassica*.
17824. *Perigaster cretura* Hbst. June, July. On *Ludwigia natans*.
17828. *Pelenomus sulcicollis* Fahr. April, July. Occurs on *Polygonum* in low ground.
17841. *Rhinoncus pericarpus* Fab. June. Occurs on Bouncing Bet (*Saponaria officinalis*).
17842. *Rhinoncus pyrrhopus* Boh. June, July. Common on *Rumex*.
17851. *Conotrachelus nenuphar* Hbst. "Plum curculio." May, June, July, Aug. Breed in plum, peach, cherry, etc., often causing great loss.
17859. *Conotrachelus elegans* Say. June. On pig-nut hickory (Packard, Hamilton).
17872. *Conotrachelus naso* Lec. Breeds in *Cratægus* (Hamilton) and acorns (Pierce).
17877. *Conotrachelus posticatus* Boh. June, July. *Cratægus* (Hamilton), *Phylloxera* galls on hickory (Schwarz).
17884. *Conotrachelus geminatus* Lec. July.
17890. *Conotrachelus anaglypticus* Say. June, Aug. Breeds in hickory (Say), quince (Knight).
17893. *Conotrachelus fissunguis* Lec. Breeds in seed pods of swamp rose mallow.
17899. *Rhyssomatus lineaticollis* Say. June; Sept. 10, 1916, on pod of milkweed at Arrochar. Larva breeds in milkweed.
17919. *Tyloderma foveolata* Say. Richmond, June 5, 1915 (Woodruff), and specimens without date. Breeds in the stems of evening primrose.

17924. *Tyloderma fragariae* Riley. "Strawberry Crown Borer."
Breeds in crown and roots.
17968. *Apteromechus ferratus* Say. June, 1891.
17971. *Cryptorhynchus bisignatus* Say. June, July. Beaten
from oak and birch.
17974. *Cryptorhynchus lapathi* Linn. July, Aug., Sept.; some-
times very common on willow. An introduced species
since 1882.
17981. *Cryptorhynchus fallax* Lec. Bred from hickory.
17986. *Cryptorhynchus tristis* Lec. June, July (Joutel). Feeds
on leaves of scarlet oak (Schwarz).
18013. *Dryophthorus americanus* Bedel (*corticalis* Say). Under
bark in wood piles, etc.
18035. *Cossonus corticola* Say. April. Aug. 3, 1907, under
white pine bark.
18073. *Stenoscelis brevis* Boh. June 28, in hickory log. July 12.
18087. *Rhodobæus tredecimpunctatus* Ill. May, June, Aug.,
Sept., Oct. "Cocklebur bill-bug." Breeds in stems of
cocklebur, joe-pye weed, etc.
18101. *Sphenophorus inæqualis* Say. Aug., Oct. The species of
Sphenophorus are known as "Bill-Bugs," and breed in
roots of grasses or grass-like plants.
18102. *Sphenophorus æqualis* Gyll. Breeds in bulbous roots of
bulrush and reed.
18108. *Sphenophorus pertinax* Oliv. April, May, Aug.; often
found on the seashore. Breeds in roots of calamus,
cat-tail, etc.
18110. *Sphenophorus setiger* Chitt. May.
18114. *Sphenophorus costipennis* Horn. March 18, 1894, Oak-
wood border of salt meadow; April, June.
18122. *Sphenophorus parvulus* Gyll. April, May, June. "Blue-
Grass Bill-Bug." Breeds in roots of blue-grass, timo-
thy, etc.
18132. *Sphenophorus zæa* Walsh. July. "Timothy Bill-Bug."
Breeds in roots of grasses including corn.

18136. *Sphenophorus melanocephalus* Fab: May, June.
 18141. *Sphenophorus venatus* Say (*placidus* Say). May, June,
 Aug., often on the seashore.
 18157. *Calendra granaria* Linn. April. Infests stored grain
 and is generally distributed.
 18159. *Calendra oryzae* Linn. August. Infests stored grain.

FAMILY PLATYPODIDÆ

18166. *Platypus compositus* Say. Clove Valley, July 25.

FAMILY SCOLYTIDÆ

18169. *Scolytus quadrispinosus* Say. Mature beetles in June,
 July and Aug. Within recent years it has been the
 cause of death of many of the hickory trees on Staten
 Island.
 18171. *Scolytus rugulosus* Ratz. Port Richmond (Chittenden).
 Insect Life, vol. v, p. 250. Dead in gum on peach tree
 in garden, West New Brighton, May 5.
 18186. *Cnesinus strigicollis* Lec. June 6 (Shoemaker).
 18202. *Chramesus hickoriae* Lec. On hickory.
 18207. *Phthorophlæus frontalis* Oliv. On mulberry.
 18252. *Leperisinus aculeatus* Say. May 5, 1906.
 18255. *Hylastinus obscurus* Marsh. Seashore, June. Attacks
 clover.
 18298. *Monarthrum fasciatum* Say. Chittenden records it as at-
 tacking beech at Port Richmond, Pro. Ento. Soc. Wash.,
 vol. 2, p. 391.
 18299. *Monarthrum mali* Fitch. May 5, on peach tree in garden
 Clove Valley, May, under bark of beech log.
 18321. *Hypothenemus hispidulus* Lec. March 13, 1892, in su-
 mach.
 18367. *Stephanodères dissimilis* Zimm. June 6 (Shoemaker).

18463. *Ips cacographus* Lec. Sept. (Thompson). On pine and spruce.
18511. *Xyleborus pubescens* Zimm. Watchogue, Aug.
18512. *Xyleborus celsus* Eich. April, in tulip log.
18536. *Dryocætes gravicollis* Lec. June.

NOTE. The citations of food plants from No. 16256 to the end are copied, unless otherwise credited, from "Rhynchophora of Northeastern America."

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CORRECTIONS

- P. 31, l. 2, for *nutalli* read *nuttalli*.
P. 35, l. 7, for *basillaris* read *basilaris*.
P. 42, l. 11 from below, for *cristosa* read *crustosa*.
P. 47, l. 9, for *Mcroweisea* read *Microweisea*.
P. 49, l. 12 from below, for *sanguinale* read *sanguinalis*.
P. 56, l. 4 from below, for *Cotinus* read *Cotinis*.
P. 58, l. 4, for *Druy* read *Drury*.
P. 63, l. 14, and p. 73, l. 7 from below, for *copalina* read *copal-
lina*.
P. 64, l. 20, for *Ampelopis* read *Ampelopsis*.
P. 64, l. 4 from below, for *tetraophthalmus* read *tetraophthalmus*.
P. 65, l. 15, for *Orsodachne* read *Orsodacne*.
P. 71, l. 17, for *virginica* read *virginiana*.
P. 77, l. 2 from below, for *Kelicott* read *Kellicott*.

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A Seventeenth Century Map of Staten Island ¹

THE PLANTATIONS, VILLAGES, AND PLACES SHOWN THEREON

GEORGE W. TUTTLE

This map is an original manuscript, dated 1670, by Robert Ryder, surveyor (size 17 $\frac{1}{4}$ in. by 51 in., scale about 1 inch = 1.7 miles), and includes within its limits Manhattan Island, Staten Island, and Long Island, as well as the adjacent parts of New York and New Jersey. The black and red ink has faded so that some of the names are difficult to decipher, but otherwise the map is in an excellent state of preservation. It is the property of the New York Historical Society, to which it was presented by Hon. John Alsep King in April 1903. Mr. King's heirs could not give any information as to the history of the map or how it came into Mr. King's possession. It is now on public exhibition at the New York Historical Society's Building in New York City.

There are but two earlier maps of Staten Island known to be in existence which give names of plantations or settlements. The names relating to Staten Island shown on the Ryder map are the following: Shooters Island, Seal Banks, Palmers, Lovelace, Norwood, Waltons, Old Town, New Dorp, and Billops.

¹ Read May 19, 1923, at a joint meeting of the Section of Historical Research and the Staten Island Historical Society.

1. Shooters Island: This is mentioned as Schutters Island nine years later by Danckaerts in his *Journal of a Voyage to New York, 1679-80*.² The name was given because the Dutch went there to shoot wild geese, so Danckaerts states.³ In recent years the island has been so enlarged and changed that the early settlers would not recognize it.

2. Seal Banks: This is now called Robbins Reef, and is to all who visit Staten Island familiar by its lighthouse and flashing light as St. George is approached. Local histories state that the old Dutch name was Robyn's Rift, meaning Seal Banks.⁴ (In the Dutch language rob or robben means seal or seals, and rif or riffen, reef or reefs.) Ryder, who was of English descent, evidently had a preference for English rather than Dutch names.

3. Palmers: John Palmer was one of a number of men prominent in the affairs of the colony who resided for a time on Staten Island. He was an assessor of Westchester in 1675 and owned property there.⁵ Brodhead states that Palmer was an English lawyer who had recently come to New York from Barbados.⁶

On May 3, 1676, Palmer's proposition to take the mill on Staten Island was agreed to⁷ and thereafter he resided here for a number of years. The mill, located near Palmers Run and Richmond Terrace, was begun by Col. Francis Lovelace, the governor of the colony, but when the Dutch took possession in 1673 it had not been completed and they authorized the contractor to finish his contract.⁸ When the Dutch retired and Andros became governor,

² Danckaerts. *Journal of Jasper Danckaerts, 1679-1680*, p. 75, 173. (Original Narratives of Early American History.) Charles Scribners Sons, N. Y. 1913.

³ Danckaerts p. 92.

⁴ Morris. *Memorial History of Staten Island* 1: 373. N. Y. 1898.

Bayles. *History of Richmond County* p. 3, 681. N. Y. 1887.

⁵ Col. Doc. Documents Relating to the Colonial History of the State of New York 13: 488.

⁶ Brodhead, J. R. *History of the State of New York* 2: 289. N. Y. 1853-71.

⁷ Hist. Bulletin. New York State Library (History No. 6) Bulletin 58: 25. 1902. (Calendar of Council Minutes 1668-1783.)

⁸ Col. Doc. 2: 580.

an attachment was levied (Nov. 12, 1674) "upon the Houses and Plantacôn upon Staten Island lately belonging to Colonell Francis Lovelace as also upon the water mill sett up by him."⁹

On June 3, 1676, Palmer was granted 80 acres from Clove Brook to a line running close to the present Richmond Street and Van Street as follows:

A confirmation Granted unto Mr. John Palmer for the mill and some Land adjacent upon Staten Island.

Whereas the Estate of Col. Francis Lovelace (late Governor here) hath been legally Attached and Apprized for Debt to his Royall Highnesse amongst which Materiall Stones and Appurtenances for a Mill in part built and about Eighty Acres of Land adjoining lying on the North side of Staten Island and being within Constables Hooke was Apprized at ffoure Thousand Guilders Sewant as by the said Apprisement doth and may appear the said Materiall and Mill not yet finished, spoiling and going to decay. And there being none on the said Island, which is very much wanted, therefore on application of Mr. John Palmer for the Generall good of the Inhabitants, the said John Palmer offering to pay according to the Apprizement By vertue of the Authority derived unto me from his Royall Highnesse I have given and Graunted. And by these presents do Give and Graunt unto the said Mr. John Palmer, his Heirs and Assignes the aforesaid Mill and Appurtenances and Land adjacent containing the quantity of about Eighty acres as aforesaid, with Meadow Ground Proporcônable hee finishing building up the said Mill making up the Dam and keeping the same in due repaire for the Publicke use as other mills are or ought to bee . . . the 3d day of June in the 28th year of his Ma^{ties} Reigne Annoq Domini 1676.

E ANDROS¹⁰

On the same date Palmer was also granted land "lying between the two runs at the Mill Creeke beginning with a narrow Point and running up wider into the Island" containing 342 acres.¹¹ This is the land between Clove Brook and Palmers Run.

⁹ Delavan. Col. Francis Lovelace and his Plantation on Staten Island, by Edward C. Delavan, Jr. PROC. NAT. SCI. ASSOC. STATEN IS. 1902, p. 62. Col. Doc. 13: 481.

¹⁰ Patents. Record of Patents in the Office of the Secretary of State, Albany, N. Y. 4: 110. Delavan p. 62.

¹¹ Patents 4: 113. Delavan p. 63.

On Feb. 25, 1678, Palmer was granted water rights for his mill, and orders were issued to the "Constable and Overseers of Staten Island to permit John Palmer to cut through the great pond for more water for his mill at Staten Island."¹²

A grant to John Palmer of 4500 acres of land on Staten Island, including the former grants, dated May 2d, 1684, recites that "the said John Palmer became and now is in Possession of all and singular the Premises and hath made great improvements thereon by building of Houses, Barns, Stables, Mills, Dammes, fencing and other Necessarys for Husbandry."¹³

A survey of 5100 acres of land on Staten Island was made for John Palmer on Jan. 17, 1687, and a patent was issued therefore March 31, 1687, which erected the whole territory "into one Lordshipp & mannor of Cassiltowne."¹⁴ This property was almost immediately, April 16, 1687, conveyed by deed to Thomas Dongan, the governor of the colony,¹⁵ and we hear no more of Palmer's connection with Staten Island matters. It is stated in the records under date of 1687 that four great guns had been discovered in Dongan's mill on Staten Island.¹⁶

The records of 1677 mention John Palmer of Staten Island.¹⁷ On April 8, 1678, an order was issued to Capt. John Palmer, ranger of Staten Island,¹⁸ and on Sep. 14, 1678, a petition of John Palmer of Staten Island is recorded.¹⁹ Palmer was a member of the council of the colony of New York in 1684-5 and in 1687-8.²⁰ On Sep. 15, 1683, he was appointed high sheriff of Staten Island²¹

¹² Cal. Hist. MS. Calendar of Historical Manuscript in the Office of the Secretary of State, Albany, N. Y., edited by E. B. O'Callaghan, Albany 1866, Part II (English manuscript 1664-1776) p. 65.

¹³ Patents 5: 141. Delavan p. 64.

¹⁴ B Deeds. Liber B of Deeds in the Office of the Clerk of the County of Richmond p. 75. Patents 6: 198. Delavan p. 66.

¹⁵ B Deeds p. 80. Delavan p. 68.

¹⁶ The Documentary History of the State of New York, by E. B. O'Callaghan, 2: 5. Albany 1850. Clute's History of Staten Island p. 63.

^{17, 18, 19} Col. Hist. MS. p. 62, 66, 74 resp.

²⁰ Civil List. Civil List and Constitutional History of the Colony and State of New York, by Edgar A. Werner, p. 317. Albany 1888.

²¹ Hist. Bulletin p. 33. Civil List p. 480.

and on Feb. 7, 1684, he and Matthias Nicolls were made the first judges of the New York Court of Oyer and Terminer.²²

John Palmer rose to distinction in New York and afterward in New England, in both of which he was made a judge. He was one of Governor Dongan's intimate counsellors and when difficulties surrounded Dongan in Sep. 1687 Palmer was sent to England as Dongan's representative. Dongan was superseded by Governor Andros, of New England, who became governor both of New England and New York on March 23, 1688, and Palmer returned to New England, of which he had been made a counsellor by the King. Palmer was appointed judge in the Superior Court of New England on June 21, 1688.²³ He was the trusted adviser of Andros as he had been of Dongan and suffered imprisonment with Andros when his government was overthrown. Palmer as well as Andros were sent to England as prisoners by the new government and were released soon after their arrival.²⁴

The Ryder map indicates a building to the east of the mill pond and somewhat back from the Kill van Kull. Probably this same building is the one shown east of Mill Creek on a draught accompanying "Description of a survey of 352 acres of land lying upon Staten Island (to the westward of Mill Creek) laid out for Cornelius Corsen and others by Ro: Ryder, surveyor, (with draught) Dec. 24th, 1680."²⁵

The house shown on this draught to the east of the mill pond, built probably by Lovelace or Palmer, we locate near Dongan Street about 300 feet back from Richmond Terrace. It is in the same locality as the building referred to in local histories as Dongan's Manor House. Richmond Terrace in 1680 apparently crossed Palmers Run (or Mill Creek as it was called at the time) over the mill dam as it does at the present time.

²² Hist. Bulletin p. 35. Brodhead p. 386, 492.

^{23, 24} Brodhead p. 511, 629.

²⁵ Cal. Land Papers. Calendar of New York Colonial Manuscripts indorsed Land Papers in the Office of the Secretary of State of New York 1643-1803 p. 23. Albany 1864. Land Papers 1: 202.

A photographic copy is on file in the library of the Staten Island Institute of Arts and Sciences.

A record of the laying out of the present Richmond Terrace has the following description: " . . . an so over a bridge To be made ouer a Creek and then on a direct line through the Earle of Linricks ²⁶ Land to the mill and So ouer the mill dam and So a Long the front of-Jacob Coffons Land. . . ." ²⁷

The date of depiction of the Ryder map, at least so far as Palmer is concerned, cannot be earlier than 1676 when he purchased the mill, not 1670, the date given in the title. Other names on this map also indicate a date later than 1670 by several years.

4. Lovelace: Since about 1669 Thomas Lovelace occupied a tract of land at what we know as St. George. It is said that when Col. Francis Lovelace arrived in the colony as governor in the spring of 1668 he brought with him his younger brothers Dudley and Thomas.²⁸ On April 7, 1670, the council of the colony had a hearing of Indians who claimed to be the lawful owners of Staten Island, and on the 9th the hearing was continued and again on the 13th, when it was arranged that the island was to be surrendered "by Turfe & Twigg" to Thomas Lovelace and Matthias Nicolls as the governor's deputies.²⁹ From 1671 to 1673 Thomas Lovelace was a member of the council of the colony ³⁰ and in 1672 was high sheriff as well as justice of Staten Island.³¹ When the Dutch came in 1673 he was no longer in good standing, his property was confiscated and he was ordered to leave. Lovelace was successful, however, in having the time of his departure extended more than once so that he remained after the Dutch conquerors had gone away.³²

In 1684 Lovelace became the sheriff of Richmond County ³³ and in 1687 was assessor for the county.³⁴ In obedience to a

²⁶ Thomas Dongan Governor of the Province of New York 1683-1688.

²⁷ Records 1680-1760 Richmond County. Stillwell 1: 53.

²⁸ Wilson Memorial History of New York 1: 342.

²⁹ Hist. Bulletin p. 11.

³⁰ Civil List p. 317.

³¹ Cal. Hist. MS. p. 137. Hist. Bulletin p. 16. Court Minutes of New Amsterdam 6: 358.

³² Cal. Hist. MS. p. 18.

³³ Civil List p. 480.

³⁴ Hist. Bulletin p. 87.

warrant from Governor Dongan, Philip Welles laid out for Capt. Thomas Lovelace on March 5, 1687, a tract of land containing 340 acres upon the east end of Staten Island "known by the name of Louelaces farme" and put on record not only a description but a draught of the property as well.³⁵ The draught shows that "Louelaces farme" extended along the shore from near St. Peter's School at St. George to the run immediately south of William Street and back from the shore beyond Westervelt Avenue (at Fifth Avenue). The records as well as old farm lines indicate, however, that the depth shown by this survey has been encroached upon. Both the Ryder map and this draught indicate Lovelace's house in a location near the present Fort Place at Madison Avenue, or Sherman Avenue.

On Oct. 11, 1687, the council minutes show that patents were passed Thomas Lovelace for land on Staten Island, evidently his farm.³⁶ A patent for Lovelace's farm subject to certain restrictions was granted to Ellis Duxbury and Mary, his wife, March 19, 1691. It states that Capt. Thomas Lovelace lately possessed a farm known as Lovelace's farm on Staten Island and that Ellis Duxbury married the niece of said Lovelace deceased, and petitioned for a grant of the premises. The property was described as "farm or Plantacion commonly called or known by the name of Lovelace's farme on Staten Island."³⁷ Capt. Thomas Lovelace died about 1689. He had occupied this farm since about 1669, for in a petition dated June 13, 1693, Ellis Duxbury and Mary, his wife, state "That yor pet^{ers} unkle, Capt. Thomas Lovelace was possest of a certaine farme or small tract of land upon Staten Island in ye County of Richmond which hee peaceably enjoyed for upward of twenty years And having no children sent for ye pet^{ers} from Barbadoes, but before they had arrived at New York was deceased."³⁸

³⁵ Calendar of Land Papers p. 45. Land Papers 2: 213. Delavan p. 74.

A photographic copy is on file in the library of the Staten Island Institute of Arts and Sciences.

³⁶ Hist. Bulletin p. 56.

³⁷ Patents 6: 374. Delavan p. 74.

³⁸ Cal. Land Papers p. 61. Land Papers 3: 69. Delavan p. 75.

5. Norwood: This is the plantation of Andrew Norwood who was granted tracts of land at the present Stapleton and Clifton in the years 1672-76-77. On Sep. 19, 1672, Andrew Norwood obtained a patent for 150 acres extending along the shore from near the present Pennsylvania Av. to north of Simonson Av. and back about to Charles Street. The property is described as bounded on the north side upon land of Capt. Dudley Lovelace near the Watering Place and extending south to the corner of a sand bay.³⁹

On Sep. 29, 1676, Norwood was granted 372 acres which extended along the shore from the above described patent nearly to the present William Street and back to the neighborhood of Warren Street. This patent recites "Three Hundred Acres of which said land was heretofore granted by Patent from Col. Francis Lovelace (then Governor) unto Mr. Andrew Norwood and Capt. Dudley Lovelace and a beginning of a settlement made thereupon."⁴⁰ It is described as bounded to the northward by the land of Col. Francis Lovelace. Twenty-five acres "lying to the northward of his plantation" was also granted Norwood on Sep. 29, 1677.⁴¹ The Ryder map indicates a house presumably the homestead of Norwood in the neighborhood of what is now Bay and Sands streets, Stapleton.

Andrew Norwood was the son of Richard Norwood a distinguished mathematician. The son had been a resident of the West Indies and had communicated to the Royal Society in 1668 "Observations on Jamaica." In 1672 Norwood must have been a resident of the colony, if not of Staten Island, for he with Capt. Dudley Lovelace and Robert Ryder are ordered by the governor to make a survey of Staten Island. (p. 102).

In 1676 Norwood is referred to in a description of a survey of his property as a "merchant of Barbadoes," but from 1677 to 1679 he must have been in the colony, probably living on Staten Island, for in 1677 he was appointed surveyor of Staten Island as appears from the following:

³⁹ Patents 3: 19. Delavan p. 60.

⁴⁰ Patents 4: 109. Delavan p. 60.

⁴¹ Patents 4: 141. Delavan p. 61.

Commission for Mr. Andrew Norwood to be Surveyor for Staten Island by the Governor.

These are to authorize and appoint you, Mr. Andrew Norwood, to be surveyor of Staten Island where you are to survey and lay out such Lotts or Parcels of land as you shall be employed about, of which to make due returnes according to Law, And in all matters relating thereunto to behave yourselfe according to the duty and place of surveyor. Given under my hand in New Yorke this 12th day of November, 1677.

E. ANDROS ⁴²

On March 26, 1678, an order was given to Andrew Norwood to lay out a lot of land on Staten Island, and on April 6 and May 14, 1678, his services were again requisitioned.⁴³

Charles Wooley in his *Journal of a Residence in New York* 1679 says: "The Fort and Garrison of this place lieth in the degree 40th and 20 minutes of Northern Latitude as was observ'd and taken by Mr. Andrew Norwood, son of the Famous Mathematician of that name, and by Mr. Philip Welles and Van Cortland Junior, Robert Rider and Jacobus Stevens, the seventh of July 1679 with whom I was well acquainted, and at that time present with them."⁴⁴

It appears that Mr. Norwood returned to and died in the West Indies, for his will dated April 24, 1684, was admitted to probate in the Island of St. Christopher. By virtue of this will the property on Staten Island came into the possession of his son, Henry Norwood, of Jamaica, who sold it in 1697 to Antony Bigg of Port Royal for £300, Jamaica currency.⁴⁵

6. Waltons: This was the farm of Thomas Walton, who was granted with Henry Hedger ⁴⁶ two lots "upon ye Hill to ye East of Ye Towne" (Old Town) in 1668.⁴⁷ Hedger some years after-

⁴² Wooley. *Wooley's Journal of a Residence in New York* 1679 p. 78. William Gowans, N. Y. 1860.

⁴³ Cal. Hist. MS. p. 66-68.

^{44, 45} Wooley p. 22, 78.

⁴⁶ Or Hedges, as some think it should be.

⁴⁷ Patents 3: 13.

ward sold out his interest to Walton.⁴⁸ Thomas Walton was a constable of Staten Island in 1674.⁴⁹

A description of the survey of the two lots above mentioned in 1685 runs: "beginning at a Certaine Marked being formerly a seller or foundation of a house" (SE. corner).⁵⁰ This land is described as "Waltons Lott" May 21, 1703, in award made to Mary Stillwell⁵¹ and is referred to as the plantation called "The Wallbou Farm" (The Walton Farm ?) lying to the east of the Old Town, in the will of Thomas Stillwell, dated May 21, 1704.⁵² On Jan. 8, 1688, a warrant was issued to Thos. Hawarden for raising the brigantine Richmond aground in the shoals near Thos. Walton's place on Staten Island.⁵³

Cornelius Coursen, principal creditor of Thomas Walton deceased, petitioned Oct. 15, 1689, for letters of administration.⁵⁴

Waltons was located, according to the Ryder map, at Old Town Road and Seaside Boulevard near Sea Avenue at South Beach. His property is shown on map of The Town of Dover upon Staten Island in PROC. STATEN IS. INST. for Oct. 1918-May 1921, opp. p. 38.

7. Old Town: The village has long since disappeared. It was doubtless the hamlet not then named, founded by Governor Stuyvesant about 1662, a half hour from the Narrows where he built a blockhouse. Stuyvesant mentions this fort with others in his letter to the directors April 26, 1664.⁵⁵ The village was located on the Old Town Road in the vicinity of the rightangled turn west of Sand Lane not far from South Beach. It is shown on map of The Town of Dover on Staten Island referred to above. Patents were granted for lots in the vicinity by Governor Nicholls in 1668,

⁴⁸ B Deeds p. 13.

⁴⁹ Col. Doc. 13: 481. Report of State Historian (New York) 1897, Colonial Series 2: 244.

⁵⁰ Cal. Land Papers p. 30. Land Papers 2: 67.

⁵¹ B Deeds p. 439.

⁵² Records of Wills New York 7: 198.

⁵³ Hist. Bulletin p. 57.

⁵⁴ Cal. Hist. MS. p. 218.

⁵⁵ Col. Doc. 2: 443; 14: 546.

which refer to it as "the Towne" and recite that the lots were heretofore laid out.⁵⁶ A survey made in 1685 and later patents refer to the village as "Old Towne."⁵⁷ It was visited and described by Danckaerts and Sluyter in 1679.⁵⁸ Apparently the village was abandoned at an early date. It is called "ye Old Towne" June 14, 1671,⁵⁹ and the records April 27, 1671, tell about "new lots to be added to the old town."⁶⁰

8. New Dorp: The New Dorp of the seventeenth century was located about $\frac{3}{4}$ of a mile southeast of the present New Dorp, near the foot of New Dorp Lane. It was founded in 1671, for on Oct. 24, 1670, instructions were given by Gov. Lovelace to Capt. Jacques Cortelyou, Surveyor General, to repair to Staten Island and lay out two Townships of 40 families each, first to add 18 lots to the 22 already laid out and then proceed to Great Kill and pitch upon the most convenient place for a Town.⁶¹ The records mention "Ye Towne already settled nor ye other Towne ordered to be layd out" Jan. 9, 1671,⁶² and "ye New Town" on March 28, 1671,⁶³ while under date of June 14, 1671, "ye Old Town & ye New Plantacon next unto it" is referred to.⁶⁴ New Dorp is mentioned in a number of surveys for patents in 1677 as follows: "land lying at ye New Dorp on Staten Island."⁶⁵

9. Billops: This is the plantation of Capt. Christopher Billop, called Bentley Manor, at the southwestern end of Staten Island and south of Tottenville. The ancient house still standing is believed to have been built by Capt. Billop about 1676.⁶⁶ On the

⁵⁶ Patents 3: 13.

⁵⁷ Cal. Land Papers p. 30. Land Papers 2: 67, 68, 71, 72. Patents 6: 251; 5: 285, 342, 344.

⁵⁸ Danckaerts p. 71, 72.

⁵⁹ Lovelace. New York Executive Council Minutes, Francis Lovelace, 2: 489.

⁶⁰ Hist. Bulletin p. 13. For further information concerning Old Town see PROC. STATEN IS. ASSOC. 6: 36-43. Oct. 1915.

⁶¹ Col. Doc. 13: 458. Lovelace 2: 487.

^{62, 63, 64} Lovelace 2: 448, 489.

⁶⁵ Cal. Land Papers p. 17. Land Papers 1: 139.

⁶⁶ Early Documents Relating to the Manor of Bentley and the Billop House, by George W. Tuttle. PROC. STATEN IS. INST. 1: 31. 1922.

Ryder map a building is indicated in the position, of that now standing. This house was the meeting place of Lord Howe and a committee from the Continental Congress at the beginning of the Revolution.⁶⁷ Danckaerts and Sluyter are believed to have visited Capt. Billop in 1679.⁶⁸ His name first appears upon the colonial records July 2, 1674, when he was commissioned to be Lieutenant of Major Andros' company.⁶⁹ It is said that Billop had a distinguished record as Captain in the British Navy.⁷⁰ He was appointed commissioner of highways of Staten Island Jan. 10, 1687.

Bentley Manor was granted to Capt. Billop in patents dated 1676 and 1687, and on draughts attached to the survey for each of these patents a building apparently the present house is shown.⁷¹

The map shows Raritan River also Woodbridge and Eliza Town (now Elizabeth) on the adjacent New Jersey shore. Considerable care as to details is evident in its making, as may be seen in the accurate location of places, islands near Fresh Kills, etc.

Robert Ryder executed quite a number of surveys on Staten Island. The first reference to his work appears to be the following:

An Ord. for Capt. Lovelace, Mr. Norwood, etc., to take a survey of Staten Island.

These are to authorize and Empower you Capt. Dudley Lovelace, Mr. Andrew Norwood, and Mr. Robert Rider, by the best skill and judgement that you have, to take a survey of ye Bounds & Lymitts of Staten Island, together with its Dimensions & Circumference, the which you are to putt upon a Platt & make Return thereof unto me, And ye justice of ye peace, Constable & other Offic^{rs} upon ye said Island, are hereby required to bee ayding and assisting unto you herein as Occasion shall require; And for what you shall act or doe in prosecu^{on} of ye Premises, this shall be unto you a sufficient Warrant.

⁶⁷ Morris 1: 144.

⁶⁸ Danckaerts p. 73.

⁶⁹ Col. Doc. 8: 221.

⁷⁰ A history of Thomas and Anne Billopp Farmar by Charles Farmar Billopp, N. Y. 1907. Hist. Bulletin p. 52.

⁷¹ Early Documents Relating to the Manor of Bentley and the Billop House, by George W. Tuttle. PROC. STATEN IS. INST. 1: 27. 1922.

Given under my Hand at fforte James in New York this 22d day of July 1672.⁷²

In 1674 Robert Ryder petitioned for pay for surveying Staten Island as follows:

To the Right honorable Edmaud Andros, Esqr. Governor General of all his Royall highnesses Territorys in America.

The humble p'tion off Rob. Ryder, humbly sheweth, whereas yo'r petition'r was employed by Col. Louelace w'th severall others for the laying out of Staten Island & afterwards was further employed by himselfe for the taking an accompt of all the meddow ground upon the said Island & to make draught of the same all w'ch y'or petitioner hath performed according to the warrant unto him directed, ffor w'ch survice (notwithstanding his great labor & charge) he hath receaued noe compensation. These are therefore humbly intreating yo'r hono'r to consider yo'r humble petitioner, he being much debilatated in this time of publicke calamity being aloane with three small children unprovided for besides himselfe & yo'r hon'rs Christian Charity shall euer oblige yo'r petitioner to pray ffor y'or hon'rs prosperity & happinesse.⁷³

Ro: RYDER

There does not appear to be any record or map of this survey in existence. The only one by Ryder to show Staten Island (except for detached surveys of individual grants) being the one herein described.

A number of descriptions and draughts from Robert Ryder's surveys are to be found among the Land Papers in the Office of the Secretary of State at Albany, among which are the following:

Oct. 5th, 1676. Description of a survey of 372 acres of land lying upon ye easterne side of Staten Island laid out at ye request of Andrew Norwood of ye Island of Barbadoes, merchant by Ro: Ryder, deputy surveyor (with draught).⁷⁴

1679 (no date). Description of a survey of a neck of land upon Staten Island containing 932 acres laid out for Christopher Billop by Ro: Ryder surveyor (with draught).⁷⁵

⁷² Col. Doc. 13: 466.

⁷³ Report of State Historian (New York) 1897, Colonial Series, 2: 243.

⁷⁴ Cal. Land Papers p. 13. Land Papers 1: 93.

⁷⁵ Cal. Land Papers p. 19. Land Papers 1: 163. See also 71 above.

Dec. 28, 1680. Description of a survey of 180 acres of land near John Palmers run, upon Staten Island laid out for Capt. Cornelius Coursen and others, by Ro: Ryder surveyor (with draught).⁷⁶

The above is the last work by Robert Ryder which appears in the Land Papers.

We find dated the next day the following: Dec. 29, 1680. Description of a survey of 357 acres of land lying at the head of the Fresh Kill upon Staten Island, laid out for Robert Ryder by Philip Welles, surveyor, (with draught).⁷⁷ Ryder therefore had property interests on Staten Island. It does not appear that Robert Ryder was at any time surveyor general. He usually signs himself surveyor although in one of his official documents he takes the title of deputy surveyor.⁷⁸

It is believed that the author of the map lived at Gravesend, Long Island, for the court at Gravesend directed the administration of his estate, and it is known that Gravesend was the home of a number of Ryders.⁷⁸ In the village cemetery at Gravesend may be seen the plot where several Ryders were buried, one of the stones dating back to 1747. Ryder died in the early part of 1681, for we have the following record: "1681 June 15th. Order of the court at Gravesend granting letters of administration on the estate of Robert Ryder deceased, to Cornelis Steenwyck and others."⁷⁹

Among the early maps of New York and vicinity the Ryder map occupies a very important place. It is one of very few original maps of this vicinity of an early date to be found on this side of the Atlantic, and is particularly valuable on account of the professional skill of the author and his intimate knowledge of the country. A photograph of the map made several years ago is in the library of the Institute. The map has been reproduced, very

⁷⁶ Cal. Land Papers p. 23. Land Papers 1: 210.

⁷⁷ Cal. Land Papers p. 24. Land Papers 1: 211.

⁷⁸ The Early Settlers of Kings County, New York, by Teunis Bergen. Ryder Family of Putnam County, New York. Clayton Ryder, Poughkeepsie, N. Y. 1911.

⁷⁹ Cal. Hist. MS. p. 97.

imperfectly however, in Executive Council Minutes, Francis Lovelace, 1668-1673, v. I, opp. p. 237. Albany 1911.

The fact that the date given in the title is about six years too early for some of the names shown on the map indicates perhaps that it was commenced on the date given in the title and not completed until the later date, or was corrected to the later date. If we use the date 1676 the documentary evidence we have brought out is in entire accord with the map.⁸⁰

This evidence shows quite clearly the relatively large number of men influential in the affairs of the colony who either lived on Staten Island or had large interest here, as well as the close commercial relations existing between New York and Barbados, an island in the West Indies settled by the English in 1625 and about three times the area of Staten Island.

Of the two earlier maps showing plantations or settlements referred to, the first is "Manatus gelegen op de noot riviere," MS. plan of New York made in the year 1639 for the Dutch West India Company. It is noteworthy so far as Staten Island history is concerned by showing the plantation of David Pietersen De Vries on Staten Island. A photostat copy of this map is in the library of the Institute. The map is described more in detail in *PROC. STATEN IS. INST.* 1:19. 1922.

The second map to show plantations is "A Mapp of New Jarsey by John Seller" (engraved on copper, 21 in. by 17 in.).

Staten Island on this map bears the name of seven plantations, three marked "Dutch Plantation," one "French Plant," one "Danne Plant.," one "Dodelus Plant" and one "Lovelace his pla." It has been shown that this map was printed from the same plate as an earlier map with an entirely different outline of Staten Island, and on which only the name "states I/land" appeared.

The British Museum has a copy of this map showing the seven plantations on Staten Island to which it ascribes the date 1665,

⁸⁰ Dr. James Sullivan, State Historian, first brought this discrepancy in dates to the writer's attention.

but as Lovelace in all probability did not possess this plantation or reach these shores before 1668 it must have been some time later that the map was made.⁸¹ A printing from a third state of this copper plate, about 1676, shows Dover only on Staten Island.⁸² A photostat copy of this latter map is in the library of the Institute.

Later seventeenth century maps show the name Welles in addition to the names Old Town, New Town (New Dorp), Dover, and Billop.

Welles on various maps refers to the plantation, at the present New Brighton, of Philip Welles, surveyor general of the province, who we have observed executed many surveys on Staten Island and throughout the province, some of them in association with Ryder. Welles resided on Staten Island at least through a considerable portion of his career.

A description of a survey of 180 acres of land lying on the northeast side of Staten Island joining the northwest side of the farm of Col. Francis Lovelace laid out for Philip Welles by Ro: Ryder (with draught) is recorded on Nov. 10, 1670,⁸³ and a patent for 360 acres of land on the northeast side of Staten Island was granted Welles on Dec. 1, 1680,⁸⁴ as well as another grant for the same property on March 17, 1685.⁸⁵ This land extended from the present Sailors Snug Harbor easterly to Jersey Street brook and south about to the easterly extension of Forest Avenue.

It is inferred that Welles came to New York with Gov. Andros in 1674, whose "steward" he is said to have been in 1675. Welles, according to the Civil List in 1675, was sheriff of Yorkshire,⁸⁶ a division of the province including Westchester, Long Island,

⁸¹ The Iconography of Manhattan Island, by I. N. Phelps Stokes, 1: 213. N. Y. 1916.

⁸² The Town of Dover on Staten Island, by George W. Tuttle. Quar. Jour. N. Y. State Hist. Assoc. p. 164. July 1921.

⁸³ Cal. Land Papers p. 20. Land Papers 1: 171. Delavan p. 72.

⁸⁴ Patents 5: 4. Delavan p. 71.

⁸⁵ Patents 5: 319. Delavan p. 72.

⁸⁶ Civil List p. 485.

and Staten Island. He was authorized to receive county rates in the absence of Sheriff Salisbury, who had gone to England, and in 1676 was appointed receiver of debts due the late Dutch West India Company. Welles is next called "Commissary to the Garrison of Fort James at New York." He was appointed surveyor on the 26th of Nov. 1680 and became surveyor general in 1684, holding that office until 1687.⁸⁷ A warrant was issued to Philip Welles on Feb. 23, 1684, "to survey the lands and meadows of the county of Richmond on Staten Island, and to lay out for each person his proper quantity according to his patent, and to ascertain how much is possessed by those who have no patents in order to their procuring the same and to make report."⁸⁸

Welles was one of the commissioners who ran the boundary line between Connecticut and New York in 1684, and being a landed proprietor, is found as a justice of the peace in Richmond County in 1685.⁸⁹ A petition of "Philip Welles of the County of Richmond" appears in the council minutes for Oct. 2, 1685. On quitting the office of surveyor general, Welles retired to Staten Island where we find him residing in 1694.⁹⁰

Welles died about 1704 for we find on Jan. 11, 1705, a petition of Richard Merrill, administrator of Philip Welles, late surveyor general of the Province of New York, deceased, with account.⁹¹

⁸⁷ Civil List p. 177.

⁸⁸ Cal. Hist. MS. p. 154. Iconography of Manhattan Island 1: 232.

⁸⁹ Hist. Bulletin p. 45. Cal. Hist. MS. p. 118.

⁹⁰ Wooley p. 79.

⁹¹ Cal. Hist. MS. p. 334.

Pierre Billiou¹

WILLIAM PRALL

It is with an especial pleasure that I stand here today and say a few words of appreciation at the unveiling of the memorial pillar to Pierre Billiou and his wife Françoise du Bois.

First, because it is always a satisfaction to rescue an half-forgotten worthy from undeserved oblivion.

Second, because Pierre Billiou was my six times great-grandfather, and my Prall ancestors from Arendt Jansen, from father to son, were born and lived and died on Staten Island, until my father's generation; and he too was born on the island.

When I became a member of the Staten Island Institute, its learned director Mr. Charles W. Leng brought forward the history of the island and spoke of the prominent part Pierre Billiou had taken in its permanent settlement. He said he could not understand why his name should have been overlooked by the analysts. I suggested that it was either because his male descendants had deserted the island or because his French lls cannot be transferred to the English tongue, so that his name became written as Biyou and Bileau, and then disappeared. In Dutch it was usually written Biljouw. Let me say that a great many other French names have been lost to view for similar reasons.

Pierre Billiou and his wife were born at La Bassée, or Wicres, in French Flanders, afterwards a part of Artois, which was then a possession of the King of Spain. They were therefore Walloons, that is French-speaking Netherlanders. They were married in the Walloon church at Leyden April 20, 1649. Françoise was a daughter of Chrétien and a sister of Louis du Bois called "the Walloon," who settled at Wiltwyck and became eventually

¹ Address by Rev. William Prall, Ph.D., S.T.D., made at the dedication of the Huguenot Church, Huguenot Park, May 18, 1924.

the leader of the "Duzine," that is of the twelve who purchased a great tract of land from the Esopus Indians and founded the community of New Paltz.

On May 9, 1661, Pierre and his wife and four younger children embarked at old Amsterdam in the St. John the Baptist. They arrived in New Amsterdam on the 6th of August following. Pierre and Françoise had four daughters born to them at Leyden. The eldest, Marie, was baptized in the Walloon church in 1650. She was my five times great-grandmother and she was betrothed and married at Wiltwyck, June 3, 1670, to Arendt Jansen Prall von Nardy (Naarden), as it is written in the Dutch records at Kingston, with the approval of her uncle, Louis du Bois.

On August 22, 1661, we read in the Documents relating to the Colonial History of the State of New York (13: 206) there appeared before the Honorable Director and the Honorable Members of the Council at New Amsterdam Pierre Billiou and Walraven Luten. They stated for themselves, as well as for some others who had arrived in the last ships, that the locality of Staten Island suited them well, and they requested therefore that some land on said Staten Island might be given them as property for farm land, meadow, and pasture, and that lots for houses and gardens might be laid out in a convenient place.

The Director General and Council granted this petition and resolved to look up a convenient place on Staten Island and lay it out for a village, which was done.

The persons who signed this petition, beside Billiou and Luten, were seventeen in number, but as only a few of them settled on the island, the names of the majority do not interest us here.

The question may be asked: why were no attempts made to colonize Staten Island before this time? And the answer is that several attempts were made. Clute in his *Annals of Staten Island* (p. 15) says that "a number of the Walloons who came in the 'Nieuw Netherlandt' in 1624 made a settlement on the Island, but that they did not occupy it long, for annoyed by the constant intrusion of the Indians, they removed to Long Island, and settled

what is now known as Wallabout." It is true that this story of Clute has been generally discredited, yet it is so precise, he must have received it from an accepted tradition, and modern scholarship has shown that early traditions are more often right than wrong.

In 1639 David Pietersen de Vries undertook to make settlements on the island, at the request of Frederick de Vries, one of the directors of the West India Company, and in 1642 Cornelius Melyn received a patent for as much of the island as had not been occupied by de Vries, and set up a claim to a patroonship. Both de Vries and Melyn adopted the Dutch policy of treating with the Indians; but in this they came into collision with the mean measures of Director General Kieft. It was Kieft who aroused the ire of the natives, so that when Hendrick Van Dyck shot the squaw who was stealing his peaches, the Indians arose and attacked all the settlements along the lower Hudson. Staten Island was invaded in its turn, and twenty-two of its ninety inhabitants were murdered. The rest were carried into captivity.

When Pierre Billiou and his associates applied for allotments of land on the island, it was almost bare of inhabitants. Probably not more than two or three families survived the Indian insurrection. It was no wonder therefore that a majority of those who joined in the petition, when they learned of the massacre in 1655, turned back; but Billiou pressed on. Fortunately for his enterprise the Dutch West India Company had purchased from Melyn all his interest and had extinguished his title.

I cannot consider the entries made in the Colonial Documents that relate to Pierre Billiou's personal actions. They are many and diverse, as he acquired land not only on Staten Island but on Long Island as well, and in New Jersey too, at Piscataway. There is one entry however to which I wish to refer. On October 2, 1661, we find written in the records of the Reformed Protestant Dutch Church of New Amsterdam (New York) that Pierre Billiou and his wife were received as members.

Concerning his political actions, I will read three entries, namely:

FORT JAMES, May 14, 1669.

I have received your return of two persons for the employment of Lieutenant of the Militia of your town . . . and in compliance with your request that a file of men do stay behind for the protection and safeguard of the place, I do think fit that Pierre Bileau do stay with a file of men for that purpose,—one of the ancient inhabitants, who is best acquainted among the Indians.

(Signed) FRANCIS LOVELACE ²

NEW AMSTERDAM, August 25, 1673.

At a meeting of the Commanders in an adjourned Council of War, Present—Cornelius Evertsen, Jr. and others. From the nomination of the inhabitants of Staten Island are elected Magistrates thereof; as Schout and Schepen, Pieter Biljou.³

FORT WILLEM HENDRICK, Oct. 7, 1673.

SCHOUT PIETER BILJOU

This serves to direct you, by order of the Governor, in case you may descry any ships coming from sea, inside Sandy Hook, instantly to send an express to notify his Honor thereof; who also expects your advice that the palisades contracted for the Fort are ready. . . .

Wherewith ending, I remain, after greeting,
Your friend,

N. BAYARD, Secretary ⁴

From the first of these entries we perceive that Pierre Billiou was trusted by the English when they took possession of New Netherland a few years after the resettlement of Staten Island, that he was spoken of by Governor Lovelace as "one of the ancient inhabitants" and as "one that was best acquainted among the Indians."

From the second entry we perceive that he was trusted by the Dutch during the short time New Netherland was returned to them in 1673. By the inhabitants of Staten Island he was nominated to the principal offices of Schout and Schepen; and by the

² Doc. Rel. to the Col. His. of State of N. Y. 13: 424.

³ Doc. Rel. to the Col. His. of State of N. Y. 2: 586.

⁴ Doc. Rel. to Col. His. of the State of N. Y. 2: 629.

commanders in a council of war he was confirmed in these responsible positions.

From the third entry we learn that he was held in high esteem by the authorities at Fort Willem Hendrick, who looked to him to inform them of the coming of the Dutch and the English fleets.

I think it may be affirmed therefore that Pierre Billiou was not only the pioneer in the permanent settlement of Staten Island, but that he was also the prop of its inhabitants and of the governments under which he served. That accordingly his name should be held in reverence by all who have followed him and who have entered into the field of his labors.

Ecclesiastical History of Staten Island in the Seventeenth Century ¹

CHARLES W. LENG

The statements that follow are based upon the researches of members of the historical section of the Staten Island Institute of Arts and Sciences but I alone am responsible for any errors that may occur. As to its early churches and congregations, they are particularly based upon recent labors of Mr. Reyden W. Vosburgh in copying the records of the churches, of Mr. F. C. Delavan, Jr., in copying the county records of incorporations, deeds, etc., and of Messrs. Vosburgh and W. T. Davis and myself in copying the records of the older gravestones. My own part has however been principally that of a compiler.

The statements to be made will be found to differ in some respects from those given in the published histories of Staten Island. Bishop Burch, in writing the History of St. Andrew's Church in 1908, said: "Careful study of these original records renders necessary a change in some of the cherished traditions of the parish but we are sure every member and well-wisher of this venerable institution desires a truthful record rather than tradition or legend, however pleasing" (*Grafton Magazine* 1:1). I trust that such differences as I am obliged to point out may be received in the same spirit.

The early ecclesiastical history of Staten Island may be divided into three periods, the first extending from 1600 to 1650, in which no documents indicating even a probability of the existence of churches are known; the second extending from 1650 to 1663, in which ecclesiastical history is possible but unproven; and the third from 1663 onward, in which, though sometimes surrounded by doubts, we have real historical evidence of congregations followed by churches. The general history of Staten Island from 1600, the date of Hudson's voyage, to 1650, the date of Capt.

¹ Read May 10, 1923, at a joint meeting of the Section of Historical Research and the Staten Island Historical Society.

Adriaen Post's settlement, has been very carefully studied by Mr. Delavan and Mr. Geo. W. Tuttle; and their results published in the PROCEEDINGS of the Institute make any ecclesiastical history improbable if not impossible. Prior to 1623 there is no claim made for the permanent settlement of Manhattan, much less Staten Island. Ecclesiastical history on Manhattan begins in 1626, when Peter Minuit brought with him, in place of clergy, two *Krankenbezoekers*, Sebastian Jansen Krol and Jan Huyck, to whose memory mural tablets were erected in 1900 in the Middle Dutch Church, 2d Av. and 7th St. (Corwin, p. 20). From 1630 to 1637 Staten Island belonged to Michael Pauw, its first patroon, who made no attempt to enter upon his purchase (PROC. STATEN IS. ASSOC. 6: 25). The first colonization was by David Pietersz de Vries, who in 1639 sent people here "with assistance to build" but lost the beginning of his colony in 1641 by the people being killed or driven away by Indians (1. c., p. 27). The next attempt by Cornelis Melyn began in Holland in 1640 and reached Staten Island in 1641 or 1642; this also ended disastrously when on Feb. 27 and 28, 1643, the Indians destroyed all but two *bouweries* (1. c., p. 27). Surely there could have been no churches built under such conditions. Melyn claimed later that he arrived on Staten Island in 1641 in the ship *Eyckenboom* with 41 persons (Melyn Papers 110); the names of two of his settlers have been preserved in a release of their contracts with Melyn, they were Joris Dircksen and Francis Jansen (Doc. Col. Hist. 13: 81) and incidentally they deserve to be remembered among early Staten Islanders. In 1645 Melyn, who had continual trouble with Director Kieft, is mentioned as being still on Staten Island (Col. Doc. 1: 498) but in 1647 he had returned to Holland (Brodhead 1: 472). Throughout this first period there is no indication of any ecclesiastical history, the abortive attempts to found colonies being shortlived and embracing only a few persons who were not specially actuated by religious motives.

During the second period, from 1650 to 1663, the case is somewhat different. On Dec. 19, 1650, the ship *New Netherland Fortune* arrived with 70 persons on board, in charge of Capt.

Adriaen Post, the undertaking having been financed in Holland by Melyn and Baron Hendrick van der Capellen toe Ryssel (PROC. STATEN IS. ASSOC. 6:28). The names of these colonists, the first to arrive in considerable numbers and to remain for a considerable period, have been preserved (Doc. Col. Hist. 13:74-75) and are apparently Dutch, viz.: Hendrick Swerinck, Paul Ercks, Hendrick Marcellis, Jan Aertsen van Heerde, Aelbert Guysebertsen van Heerde, Aerent van Hengel, Severyn, Jan van Oldenzeel called Elsen, Jan Wesselinck, Gylart, Hermken, Gerrit Jansen van Steenwyck, Wynott, Hans Berentsen of Osenbrugge, Berene Driessen from Oostenengh, van Steenderen. The colony thus established endured until Sept. 16, 1655, when it was destroyed by Indians (PROC. STATEN IS. ASSOC. 6:30). During 1656, 1657, 1658, and 1659 abortive attempts were made to re-establish it, but in 1659 not more than two or three families lived here, protected by five or six soldiers (l. c., p. 33). While this colony was in existence on Staten Island, Rev. Samuel Drisius had become pastor of the Dutch Church in New Amsterdam, having arrived in 1652, and it is possible that he may have preached here about that time but there is no definite proof that he did so. In a passage on page 615 of Brodhead's History of the State of New York, based on an examination of the archives of the Classis of Amsterdam, he is said to have "occasionally visited Staten Island, where a number of Vaudois or Waldenses soon settled themselves." The date under which Brodhead makes this statement is apparently 1656 but the context shows that it refers to the next stage in Staten Island history.

Following the failure of Capt. Post's colony we find on Aug. 22, 1661, the petition for "farmland, meadow and pastures" on Staten Island of "persons arrived by last ships" including some French names, repeated to this day in Staten Island families. These petitioners, or such of them as actually settled on Staten Island, were quickly joined by others, so that they were described in 1662 as "12 or 14 families of Dutch and French from the Palatinate" (Col. Doc. 14:546). From a list of early immigrants to New Netherland, 1657-1664 (Doc. Hist. N. Y. 3:33-

41), we can select some French names later known on Staten Island and in some cases their place of origin. Among such are Pierre Billiou, Pierre Niu, Moillart Journeay from "Walslant," erroneously identified by some authors as Pays de Vaud, but in reality French Flanders. This settlement was on the south side of the island and soon involved the localities now known as Old Town, New Dorp, and Great Kills, for in 1664 Gov. Nicholls had promised Jacques Guyon a grant of the land there on which he had settled.

It will be apparent from the facts thus set forth and abundantly supported by documentary evidence, how utterly impossible is the legend of a Waldensian church on Staten Island in 1650. If the term Waldensian is used in its true sense of inhabitants of the Vaudois valleys of the Cottian Alps of Italy it is doubtful if any ever came to Staten Island at all; if it is used in the broader sense of French Protestants they began to come in 1661 and, mingled with Dutch, were then our first permanent settlers. So far as ecclesiastical history is concerned, without losing sight of the two bouwerries that survived the Indian attack of 1643 or the possibility of Drisius having ministered to Post's colony in 1653, or to the two families, protected by soldiers, in 1659, we may safely pass in our search for established congregations and churches to the third period, commencing in 1663.

As to the beginning of this period we rely upon a letter of Rev. Samuel Drisius to the Classis of Amsterdam dated Aug. 14, 1664, reading in part as follows:

"The French on Staten Island would also gladly have a preacher, but their families are few in number and poor. . . . In the meantime that they may not be wholly destitute, Gov. Stuyvesant, at their request, has permitted me to go and preach there every two months and administer the Lord's Supper. This I have done for about a year; in the winter season it is troublesome on account of the great water or bay, which must be crossed, and the showers and storms, which occur" (Doc. Col. Hist. 13:391).

In this letter we have the first conclusive evidence of preaching of the gospel on Staten Island and we should pause a moment to interpolate what we can learn of our first preacher. Rev. Samuel

Drisius was born in Holland about 1600; he had prior to 1652 preached there and in England, becoming capable of preaching in English and French as well as Dutch. In 1652 he came to New Netherland, and after visiting Virginia on diplomatic work, was pastor of the Dutch Church in Manhattan until his death in 1673, which followed after three years of aged feebleness. He was already 63 years old when he crossed the bay in winter and summer to administer the Lord's Supper to the 12 or 14 families on Staten Island. This picture of the venerable Dutch preacher who first served the cause of religion here should begin our ecclesiastical history instead of one confessedly imaginary of an alleged Waldensian Church that probably never existed, and certainly not in 1650.

Before proceeding with the ecclesiastical history of the remainder of the 17th century I must ask you to compare the facts concerning Drisius with the story as told by Clute and copied by later historians. In Morris 2:275 you will find:

"Rev. Samuel Drisius, who was one of the pastors of the Dutch Church in New York, from 1652 to 1682, preached regularly once a month to the Waldenses on Staten Island from about 1660 onward." There are 4 errors in this short statement: 1, Drisius having died in 1673 could not have been pastor of the Dutch Church nine years later; 2, he preached every two months not once a month; 3, he started in 1663 not 1660; 4, he preached to the French not the Waldenses. Such a comparison will serve as an apt illustration of the danger of accepting traditional history as authentic.

Following the certainty of Drisius having preached on Staten Island in 1663 we have found nothing equally definite until 1681, though there is reason to believe that other pastors in New York, Long Island, and New Jersey may have furnished, as Drisius did, an occasional supply. On June 25, 1681, Rev. Casparus Van Zuuren, pastor at Long Island from 1677 to 1684, wrote to the Classis of Amsterdam: "I have likewise been requested to administer the Communion for the congregation on Staten Island." On Sep. 15, 1681, he also wrote: "our preacher is burdened with the services . . . on Staten Island"; and on Oct. 30, 1681, he said: "we have . . . on Staten Island about fifty . . . mem-

bers" (E. C. 776, 787, 795). Confirmatory of the theory of the dependence of the people of Staten Island upon irregular pastoral ministry may also be quoted a passage from the journal of two Labadist travelers, Jasper Dankers and Peter Sluyter, who spent the days from Monday Oct. 9 to Friday Oct. 13, 1679, in walking through Staten Island. They say: "They have neither church nor minister, and live rather far from each other and inconveniently to meet together. The English are less disposed to religion, and inquire little about it; but in case there was a minister, would contribute to his support. The French and Dutch are very desirous and eager for one, for they spoke of it wherever we went. The French are good Reformed Church-men, and some of them are Walloons" (Mem. L. I. Hist. Soc. 1: 142^y).

The population at this time was estimated by Dankers and Sluyter at 100 families (l. c. 142) and the congregation was stated by Van Zuuren to have 50 members. Instead of a minister they probably had a voorlezer, for Van Zuuren speaking of other localities says (E. C. 755): "Some congregations which cannot afford a minister are satisfied with a voorsinger or voorlezer"² (Corwin, p. 18).³

In 1682 the English Government endeavored to supply the deficiency by the appointment of Rev. Morgan Jones as minister and the levying of a tax for his support (Col. Doc. 13: 556). The French people of the island protested, however, against contributing to his support "by reason of his ill life and conversation" (Col. Doc. 13: 567). He was defended by the English Justice Stilwell, who said the real objection was his inability to preach in French and Dutch (Col. Doc. 13: 568), but it does not appear that his ministry was ever more than nominal.

In 1683 the Rev. Petrus Tesschenmacker came to Staten Island and seems to have been the first resident minister as well as the first to be ordained in America. He was ordained by the three

² Voorlezer is defined by Wassenaar as "reader to the commonalty on Sundays of texts of Scripture with the creeds."

³ They had however no church in 1679, according to Dankers and Sluyter who walked from the east to the west end of the island and then to the north shore.

Dutch ministers in this country in 1679, their action being approved by the Classis of Amsterdam in 1680. Previously he had supplied the church at Kingston, N. Y., and subsequently had preached at South River. On Oct. 30, 1682, he wrote: "I am going to Staten Island to engage in the ministry there during the winter." Rev. Henry Selyns, one of those who ordained him, wrote Oct. 21, 1683: "he had fixed his thoughts on Staten Island." He was called to Schenectady in 1683 but apparently did not go there for about three years, for Sep. 20, 1685, Selyns wrote: "he was in doubt whether to accept it or not," and Sep. 9, 1686, Rev. Rudolphus Varick wrote: "upon the removal of Dominie Tesschenmacker to Schenectady." 80 acres of land were laid out for him on the south side of Staten Island by Philip Welles, surveyor, Apr. 4, 1685, and his cattlemark is recorded at about the same time. All of which facts indicate that he preached on Staten Island from 1683 to 1686 and supported himself in part by farming. On Feb. 8, 1690, about midnight, after having left Staten Island, "he and most of his church members [in Schenectady] were surprised by a band of French and Indians, and all were massacred. The Dominie's head was split open (by a tomahawk) and his body burned up to the shoulders" according to Selyns' letter of Sep. 14, 1690, to the Classis.

There are some indications, I admit not very definite, that the first church building on Staten Island was erected during his ministry. Such would have been a natural result of adding a resident pastor to a congregation of fifty or more eager and desirous of church and minister as Dankers described them. Morris quotes from an unidentified source describing Stony Brook: "ye church is small and built of stone . . . erected when ye village was founded in 1658. Ye preacher discourses in both French and English languages." The date 1658 is, from what we have already seen, well nigh impossible, but if meant for 1685, it would coincide with Tesschenmacker's ministry. Mr. Vosburgh has discovered in *Journal of Travels from New Hampshire to Caratuck in the Continent of North America*, by George Keith, London

1706, the following sentence: "Dec. 13, 1702, I preached at Staten Island in the Town House on Titus 2: 11, 12."

Stony Brook was in 1702 the seat of the County Government and there if anywhere must have been the "Town House" in which Keith preached. That it was not regarded as sufficient in 1704 is shown by Col. Laws N. Y. 1: 573-4: "and whereas there is wanting in the said County of Richmond a County Jail and County House." It may have been the same building as Morris describes, erected during the ministry of Tesschenmacker and used for both civil and ecclesiastical purposes for some years after.

From the end of Tesschenmacker's ministry the tendency of the church to divide along lines based on nationality, first shown in the dispute over Rev. Morgan Jones, assumes such proportions as to make it most convenient to consider the French, English, and Dutch separately.

The French congregation as a separate organization dates, according to Corwin's Manual, from 1687, when Laurentius Van den Bosch "organized the French on Staten Island into a congregation independent of the congregation in New York" (Corwin, p. 811). This congregation in 1693 subscribed £3 for the relief of slaves in Salle (E. C. 1064). Van den Bosch had trouble with Henricus Selyns, Dutch pastor in New York, was suspended, and went to Maryland. Rev. Pierre Daillé, pastor of French Church in New York and a leader among the Huguenots, preached occasionally on Staten Island (Corwin, p. 401). In 1693 the French congregation secured the services of Rev. David de Bonrepos, of New Rochelle, who preached for them until 1717 and lived until 1734. His congregation in 1695 was French 36, English 40, Dutch 44, he being at that time the only resident pastor bringing all the nationalities together. In 1698 the congregation received a deed from John Belvealle Sr. of land at Green Ridge, the earliest ecclesiastical deed Mr. Delavan has found, and for some years thereafter the preacher and his congregation prospered. De Bonrepos' name appears frequently in the records, in 1698 (Abs. of Wills 1: 291) he is a creditor of William LeCounte; in 1703 he is a witness; in 1711 he married

Martha, widow of Thomas Stillwell, and thereafter if not before, by several indications seems to have been possessed of wealth. His will and that of his wife were proved in 1734 (*Abs. of Wills* 3:148, 213). The Church records have disappeared but Mr. Vosburgh has found in the Samuel Jones papers, sworn copies of records of 1696, 1710, and 1714, executed by Henry Latourette in 1758.

Mr. Lockman has also found a reference to these records in the transfer of membership of Pieter Lockman from French church, Staten Island, to Dutch church, New York, on Aug. 31, 1697.

The congregation to which de Bonrepos ministered lost its English members with the establishment of St. Andrew's and many of its Dutch members with the establishment of the Dutch Reformed Church. In 1865 Gabriel F. Disosway wrote: "I have often visited the venerable spot, and all that remains to mark the sacred place is a single broken gravestone." In 1876 Rockwell wrote that "only a few stones in the little graveyard are left." Clute in 1877 makes substantially the same statement, while Bayles in 1887 gives as the only inscriptions remaining: "Teunis Van Pelt, died 1765, aged 65 years; Mary, his wife, died 1762, aged 59 years; and two others, dated 1784 without names" (Bayles, p. 94). Considerable effort has been made by Mr. W. T. Davis, aided by Miss Katherine Trench and Mr. George W. White, to find these stones or other relics of the church, but unsuccessfully. The site, from the investigations of Messrs. Delavan and Vosburgh, seems certainly to have been near the long barn on Mr. White's farm, described on Bromley's Atlas as Blocks 1519 and 1520, plate 38, vol. 2.

After the death of de Bonrepos, or even before it, the French congregation became merged with that of the Church of St. Andrew.

The history of the Church of St. Andrew has been so recently written by Bishop Burch (*Grafton Magazine* 1: no. 3, 1908) that will treat it briefly. In 1693 Gov. Fletcher appears to have taken lively interest in church matters and by his urging there was

passed Sep. 22, 1693, "An Act for Settling a Ministry and Raising a Maintenance for them in the City of New York, County of Richmond."

This act received the royal signature May 11, 1697 (Col. Doc. 6: 21), and was the beginning of the work here though apparently not immediately operative. The Society for the Propagation of the Gospel, otherwise called the Venerable Society, sent Rev. George Keith as missionary in 1702 and Rev. John Talbot became his assistant. Both preached on Staten Island. Rev. William Vesey, rector of Trinity Church, N. Y., by his urgent letters aided in the coming of the Rev. Aeneas Mackenzie as the first settled missionary of the English church on Staten Island. His first report, Nov. 8, 1705, shows that he preached in the French church afternoons and deplored the lack of schools and teachers. By 1707 he had secured from the Venerable Society money for three teachers. In August 1708 he announced the name The Church of Saint Andrew. On June 13, 1709, he was still preaching on sufferance in the French church¹ in the afternoons but in that year the foundations of the church were laid and it was completed in the summer of 1712. Aug. 6, 1711, William Tillyer and wife gave a deed for the site. This church Mackenzie described as "a pretty handsome church of our own, built of stone." It was probably 25 by 40 feet in size.

Queen Anne succeeded to the throne Mar. 8, 1702, and from 1704 supported generously the cause of religion. She did not however build the church, the undertakers of which were Staten Islanders, urged thereto by Mackenzie and aided by Caleb Heathcote. Queen Anne gave bible, prayer book, silver communion service, and a royal charter which opened the way for land grants and the future growth of the parish. The first rector Rev. Aeneas Mackenzie was born about 1675, educated in Scotland, and died in 1723; during his short life he did much for Staten Island, so much that after his death the justices united in a testimonial to the man "whose unblamable life and splendid labors have done so much for the cause of religion on Staten Island."

I shall not follow the history of the Church of St. Andrew

further as I am already beyond the end of the 17th century. Those interested will find its history told in the article already mentioned, written by Bishop Burch.

We come now to the story of the Dutch Reformed Church at Port Richmond. Following the departure of Tesschenmacker in 1686, the Dutch people became as we have seen an important part of the French congregation to which Van den Bosch and Daillé preached and over which de Bonrepos presided after 1693. The next step in their history, as Mr. Delavan has heretofore shown, is a lease in 1696 for 50 years to the Dutch congregation of land at Richmond. Next in 1700 is recorded a sale of the voorlezer's house with consent of the congregation (the house being at Richmond) and a deed to the congregation of a piece of land 30x40 from Daniel Shotwell to build a church. This deed contains a condition: "provided that no person or persons shall live in the said church which if the said congregation of the Dutch shall presume to put any person therein then this my gift be void." The location of this 30x40 ft. is uncertain; the description in the deed starts at a tree, but from Shotwell's having at the time owned land near what is now Merrell Avenue, Bull's Head, it is surmised that it may have been there.

Wherever its location, the facts clearly show the separation of the Dutch congregation from the French in 1696. Apart from the difference in language, the increasing Dutch population on the north shore had become a factor. The map accompanying the survey of the Coursen patent in 1680 by Ryder, shows five houses at what is now Port Richmond. The report of road commissioners in 1704 shows the burying ground that now surrounds the Dutch Reformed Church to have been then already in existence. I believe another factor of prime importance was Rev. William Bertholf. He was born in Holland in Feb. 1656 and appears from a reference to him by Varick to have been originally a cooper at Sluys. Prior to 1693 he was voorlezer at Bergen, in that year he was ordained and became pastor at Hackensack and Passaic but also instrumental in aiding congregations elsewhere including Staten Island. Variouslly described in the records as Rev. Guil-

liaume Bertholf, Dominie Gilliam, and Dominie Batoivius, he performed baptisms for the Dutch congregation in 1698, 1703, 1708, 1709, 1713. His biographer, Rev. David Cole, says of the Staten Island church, which he believes he was instrumental in founding, "for some time before 1700 much work had been done by the settlers themselves." This work done by the settlers themselves we construe as the building of the voorlezer's house at Richmond, its sale and abandonment for a more convenient location at Bulls Head, to be followed by a final move to Port Richmond, where the burying ground was by 1704.

In 1714 a license for the church was granted by Gov. Hunter, and according to the marble stone in the present church, the first church on the site was built in 1716. The deed for the land from Dirck Hooglandt is dated in 1721, but Mr. Vosburgh informs me the deed often followed instead of preceding the erection of the building. The original gift of land was the piece on which stood the church and contiguous to the burying ground. The form of the church was hexagonal, as shown by the diagram made in 1751 and preserved by the church, on which are written the names of the congregation at that time, the men around the wall, the women in the center. The names have been interpreted as those of pew holders, but as pointed out by Mr. Vosburgh, erroneously, for they indicate in reality sittings only; the church was about 35 ft. wide as shown by counting up the sittings and considering the size of the land deeded for the church. In this connection Mr. Disosway's description of early Dutch churches is pertinent: "of the usual form, an octagon, with a cupola. It had no pews or gallery, the people furnishing their own benches or chairs, (p. 321). . . . The collection bags, small, black, velvet articles, attached to long poles, were in use a long while, each with a small bell at the bottom, to call the attention of the indifferent or drowsy to the important duty of making a benefaction. These sub-treasuries of church Sabbath collections were hung on pegs, or hooks, beside the pulpit, near the deacon's pew, and this officer received the people's gifts. . . . The voorleser, or clerk of the church, occupied a little pew in

front of the pulpit, and had a rod, on the end of which were placed notices to be read, and which he thus quietly passed up to the dominie for publication" (p. 328).

The church did not immediately secure a pastor. Baptisms are recorded in 1715, 1717, 1718 by Dominie Freeman, of Long Island, and in 1717 also by Dominie Antonides. It was not until 1718 that Rev. Cornelius Van Santvoord accepted a call from the united French and Dutch congregations, and the church was fairly started on a career that has endured until the present time.

The facts that I have thus briefly given have been gleaned by Mr. Vosburgh's competent and painstaking search of the records of this church. Thanks to some departed worthy unknown to us, this church, alone in that respect on Staten Island, possesses an unbroken record from 1600 to date. The binding of the first record is gone, the pages do not follow their original sequence, but it is all there. It needs to be studied by an expert who could restore the original pagination and then to have each page protected as has been done elsewhere, but even as it is now, it goes back into the past further than any church building, further than any gravestone, further than any other similar record on Staten Island.

In tabular form the early ecclesiastic dates on Staten Island are therefore:

FRENCH

DUTCH

ENGLISH

	Drisius 1603-4	
	Vanzuuren 1681-2	
Daillé 1683-6 N. Y.	Tesschenmacker 1683-6	
Van den Bosch 1687	Varick 1686-90	
Congregation org ^d	"Voorlezer" 1690	
Church built 1698	Vital records begin	
De Bonrepos 1693-1717	Bertholf 1698-1713	Keith 1702
	Freeman 1715-1718	Talbot 1702-4
United in the call to	Antonides 1717	Mackenzie 1705-23
Van Santvoord 1717	Vas 1717	Church built 1709-12
	Church built 1716	
Merged with English	Van Santvoord 1718-42	
1734		
Vital records lost	Vital records 1696 to	Vital records 1752 to
	date	date

Local Notes on the Gray Squirrel ¹

WILLIAM T. DAVIS

With the passing of the onetime considerably wooded areas of Staten Island, the death of all of the chestnut trees large enough to bear fruit, and the near death of most of the hickories through the burning of the woodland and subsequent work of a destructive Scolytid beetle, the native gray squirrels had to do one of two things, either die out completely or change their habits by becoming more domestic. Fortunately they were able to attain the latter. This has been achieved by their intelligence aided by their considerable size and agility. No doubt the chipmunk, which is becoming rare on Staten Island, might have maintained itself if it had not been for that subsidized prowler the domestic cat. While we have seen a cat chase a gray squirrel, and know that they sometimes kill them, yet a full grown gray squirrel is not likely to be molested by the average cat.

On March 29, 1913, some boys found a squirrel's nest near Richmond which contained three young ones. They were covered with hair but their eyes were not yet open. Unfortunately the boys took the young, which they brought to the Public Museum. We have found in a nest, probably made by a crow and later covered over and lined by a squirrel, nearly full grown young on the 18th of April. Occasionally in the late summer or fall there is a second brood of squirrels.

Once there were a great many red cedar trees on the island and the gray squirrels often used the soft bark for their nests. This was stuffed in some hollow in a tree or served as lining for the large nests made of small dry branches or of leaves. An old nest of a crow is indeed very often used as a foundation for these nests. On Dec. 20, 1885, I found a large nest made entirely of cedar bark, the middle portion being very fine so that the squirrel could burrow in it with ease. There was a hole facing the south or southwest and just over a large branch so that the occupant could use

¹ Read at the regular meeting of the Institute October 20, 1923.

this as a sort of doorstep. This nest was built in a small pine. On May 8, 1904, I found a gray squirrel's nest that had been blown out of a tall tree. The outer structure of brown leaves was lined with a mass of soft bark from the cedar. The bark at the center was finer and softer than that nearer to the outside. One often notices where the bark has been pulled from the cedar trunks by squirrels and mice, but since these trees have become scarce, the squirrels often use the strips of dead bark that they pull from the dead branches of tulip trees.

One of the most noteworthy gray squirrel's nest that we have ever found was near the Peconic River on Long Island. The resourceful animal had gathered quantities of oak leaves eaten by the caterpillars of one of the *Anisota* moths that were common in the summer of 1910. The caterpillars had left the midrib and principal veins of the leaves, and the squirrel had gnawed off the ends of the branches, each twig bearing several of the skeletonized leaves, and with this wiry material a fine nest had been constructed.

Near Richmond, on Jan. 31, 1886, we found a nest in a cedar tree, which had been frequented by a gray squirrel, but on this occasion, when the nest was poked with a pole, two flying squirrels appeared.

Gray squirrels are omnivorous creatures, and as a species will eat many things, but some of them have individual preferences. I have tried bread with some of those in the city parks; some will eat it and some will not; all however are fond of peanuts; and I have fed them chocolate, which they liked very well.

In a wild state gray squirrels seem to prefer nuts but our local gray squirrels, as has been stated, can no longer get a supply, and even in the past when nuts were more plentiful they ate much else. They may often be observed eating the buds of trees or various fruits, and they commence to visit the cherry trees when the fruit is just ripening. They are also fond of fungi. Often they dig a surprising number of holes in quest of food, and on Jan. 16, 1904, near Richmond, we saw where gray squirrels had been digging in

the snow for buried nuts, but only in three cases could we be sure that the quest had been successful. On a mild rainy day in Dec. 1906 we found where a gray squirrel had that morning dug twenty-seven small holes in the sand about a chestnut tree near Tottenville.

On Dec. 29, 1907, we found at the base of a sweet gum many seed vessels of that tree that had been eaten by a gray squirrel. All of the sharp points had been eaten off, and the seed vessels were round and rather soft. It was evident that they had been brought to the same place not only in 1907 but also in 1906, for we found several that had been eaten some time before and were now weathered and dark colored. On Jan. 3, 1909, we found many sweet gum capsules collected near the base of a tree though not in a pile. They had been torn apart into rather large pieces and the seeds eaten.

On Aug. 5, 1909, the following observations were made in Prospect Park, Brooklyn. At this season the squirrels are probably not presented with as many peanuts as in winter, but they secure a considerable food supply from a number of trees. I saw one squirrel plucking the green fruit of a species of *Crataegus*. He seemed particularly fond of the seeds and would bite the fruit in two and extract a few seeds, permitting the remainder to fall to the ground, a very wasteful proceeding. The ground under the *Crataegus* was quite strewn with the fruit thus opened. I found the same conditions under two other thorns of different species. Occasionally the fruit cluster with several leaves was gnawed off and allowed to fall to the ground. These of course could be opened later, as is done with the oak apple galls and pine cones that are gnawed off of trees. Green hickory nuts from quite a number of trees, including two species, were found eaten. Usually half of the outer husk and also about one half of the nut were eaten away to get at the interior, which in the case of even the large mocker nuts was pretty well cleaned out. They did not seem to be as fond of black walnuts but had gnawed a number from a tree and tried pretty hard to divest them of the bitter

husk and get at the meat within. This in some cases had been eaten, but in others the nut had been abandoned. The fruit of the flowering dogwood is also one of their sources of food supply in midsummer, for I found many under a tree; they had been bitten in two and the seed extracted. The acorns of several English oaks had received much attention, and the ground beneath the trees was strewn with acorn cups gnawed at the base in the characteristic way. There were quite a number of acorns that had been cut off the tree and lay on the ground unopened. The ground beneath one ironwood (*Carpinus*) was thickly strewn with the long bunches of seeds that with wings and all had been cut from the tree by the squirrels; sometimes even a few leaves had been included. These small seeds had been opened like those of the flowering dogwood, that is, mostly along the long diameter.

Reference is made above to the acorns cut off the tree by the squirrel. These and also those that fall off are often carefully examined by the gray squirrels for the acorn weevil larvae they may contain. The squirrel bites off a small part of the cup so as to expose the base of the acorn and then punctures it slightly. The odor no doubt tells if there is a larva within, and if such proves to be the case the hole is enlarged and the highly prized morsel secured. (See Canad. Entom., Jan. 1907.)

They also open the large galls so common on some black oaks. Naturally these galls would stay on the trees all winter, or at least but few would fall off. Gray squirrels sometimes discover that each one contains a fine plump larva, and so in the early part of June on Staten Island we have known them to cut off the galls on the infested black oaks, let them fall to the ground, and then open them. Usually a few large pieces of the outer shell are removed from one half of the gall, then the spongy interior is taken out in two or three pieces and the larvae in the central cell secured. On June 6, 1908, we found over one hundred of these large galls under a black oak near Richmond each of which had been opened as described, and on subsequent occasions other trees from which the galls had been removed. Many black oaks how-

ever that are laden with these large galls do not have them removed by the squirrels; they probably escape their attention during the early summer. The gallfly hatches by about the middle of June while the gall is still on the tree, so the squirrel has not a very long season in which to operate with the certainty of securing full grown plump larvae. On Nov. 17, 1907, in the woods near Baldwin, Long Island, we found a meat bone that a gray squirrel had placed in its nest about twenty feet from the ground. It had been gnawed on both outer edges, top and bottom. In the woods of Staten Island on Dec. 19, 1909, another squirrel-gnawed meat bone was found. Squirrels sometimes visit refuse heaps. It is not always the expectation of getting some nutriment out of an object that prompts a squirrel to gnaw it, for we have seen one gnawing a fence picket most industriously.

A certain amount of trustfulness has done much to ingratiate the gray squirrel with man, and while many have lost their lives by being too trustful, yet the trait has undoubtedly contributed to the preservation of the species in the midst of human environment. Then too their inquisitiveness is so amusing that it has saved some of them from being shot, especially in these days of a greater appreciation of our animal neighbors.

One day while I sat on a fence in the woods I felt it shake slightly, and looking about saw a fine gray squirrel sitting only one rail's length away. Its tail was vibrating rapidly and it was evidently much displeased that I should be sitting on the "squirrel's highway." After some time it ran up a dogwood tree and sat on a branch waiting for me to go on, but tiring of this it ran back along the fence. On Sep. 11, 1897, while leaning against a rail fence in the woods, I felt it shake and recognized that a squirrel must be near. Upon looking up I observed a gray squirrel a few posts away. The squirrel regarded me for some time, then left the fence and climbed a hickory tree, threw down one nut, and in his mouth brought down another which he buried. He got on the fence again and regarded me once more, sprawled out on the top of a post with his legs and tail hanging over, very

restful, got tired in about ten minutes, stood up on the post and waved his tail briskly, then ran off up the fence in the direction from whence he came. He was disappointed that I did not move away and let him run along the fence.

Sometimes gray squirrels are very cautious, especially in the few remaining wild areas of the island, and seek safety in keeping out of sight as much as possible; or they will sit motionless and so hope not to be seen. On May 9, 1909, a gray squirrel was seen sitting motionless on a large limb near the main trunk of a tree. He thought no doubt that he was unseen. We walked about the tree, the squirrel being about twenty-five feet away; also we made much noise, but he did not move; and we left him there undisturbed.

In spite of their agility in leaping from branch to branch, gray squirrels sometimes fall and injure themselves. I have seen one fall several feet before it secured a hold on some very small branches along which it ran. On Aug. 18, 1889, in the woods near Richmond Valley, I found a gray squirrel that was injured, could not move its hind legs, and lay flat on the ground. When it saw me coming it put its tail over its back trying to hide itself as much as possible. I gathered it some partridgeberries and acorns but it was unable to eat them though it tried to do so. I concluded that it had fallen out of one of the forest trees and thus injured itself.

Several years ago an albino gray squirrel was often seen in the vicinity of Westerleigh, Staten Island, and I and others have seen the black variety of the gray squirrel in the forested part of the Botanical Garden, Bronx Park.

The writer has had captive gray squirrels on two occasions. The first pair were collected on Staten Island when they were very young. They were particularly fond of butter, which they would lick entirely off of the bread before eating any of the latter. Watermelon also was much prized as a food. Much dry corn is not good for squirrels in captivity, for overfeeding with it seemed to cause fits, from which one of my squirrels died. On occasions

smoked beef was eaten but on others it was refused. I have seen one get on the back of the other and hold him down while he pulled hard at the piece of bread or nut, and if he got it his companion would treat him in the same way, and so the nut would change mouths many times before it would be entirely eaten. There were many ungnawed nuts but only one squirrel was inclined to do the gnawing, the other relying upon getting something away from him. All the time these scrambling matches were going on, the squirrels uttered a plaintive cry, a sort of dissatisfied grunt. However, their quarrels were easily mended, for oftentimes when one was lying in the sun the other would come and lick him tenderly over the head and body, as cows do one another. When a pear was given to them the skin was first removed, sometimes quite a large space being peeled before even the first little nibble was taken. The pieces of pear skin were thrown out to the left and were for the most part about as large as the nail on one's little finger.

Squirrels have a considerable knowledge of odors, for with a tame squirrel that will permit you to put your head close down to his while he is investigating anything, the constant sniffing of the air is one of the first things to be remarked. Like rats, mice, and rabbits, their noses are kept constantly moving to catch the varied scents that may give them a knowledge of the surroundings. My squirrel used to come to a small round hole in the cage, and instead of putting its eye there to see what was going on without it would place its nose at the opening, showing that it relied more on the sense of smell than sight in such cases.

After one squirrel had died I placed the cage one night in the chickenhouse, hanging it up on a nail. I thought that the squirrel might like to view the rats and chickens at a distance, and that they would afford him companionship. However, at the end of a day I found my squirrel so frightened that he would not come to the bars of the cage to see me when I came to feed him, so I took him back to his old quarters and he soon regained his sociability.

I permitted this squirrel to run about the garden, though always keeping him in view. On such occasions almost his first act was to roll in the leaves or sand that lay in the gutter of the garden walk.

Gray squirrels have a number of signs and cries to indicate their mental state. The low grunt, a plaintive protesting sound, and the vibrating of the whole body and tail, when surprised accompanied by a crackling sound. Or they may rapidly vibrate a fore paw, as I have seen the deer mouse do.² When the cage containing my two captive specimens was approached with something to eat in the hand, there was also a pleasant kind of grunt indicative of satisfaction or impatience.

In 1889 the writer owned a second pair of squirrels, a male and female. They were kept out of doors in a very large cage from April to the approach of winter. They were very fond of dandelion leaves, holding them lengthwise and eating down the stalk. Lettuce was also a great favorite. They were also fond of clover, and gooseberries and raspberries were eagerly eaten. When eating a hickory nut they commenced by biting off the little sharp point on the end. They did this even if they desired to simply carry the nuts about or before burying them in the litter at the end of the cage. They did not seem to be able to detect a nut with a bad or dried kernel without gnawing a tiny hole into it, whereas a chipmunk I had on one occasion threw away all of the nuts of light weight. They ate very fast, an apple being devoured in a short time, after which they would wipe their mouths clean against the woodwork of the cage and sit on the perch and chatter their teeth, denoting their excitement.

They looked out of their box, one head touching the other, and seemed very loving, but after a few minutes they would quarrel. When they stretched themselves after sleeping, they not only put their fore paws out straight but also lifted them as high as they could. They usually gaped at the same time. Their fleas gave them much exercise, and they spent considerable time in

² PROC. NAT. SCI. ASSOC. STATEN IS. Jan. 9, 1886.

diligent scratching. They would roll on their backs on the bottom of the cage or stretch out at length in the sun on the porch. The female was much more excitable than the male.

One day I gave them a stag beetle. As soon as it was discovered by the male squirrel he picked it up in his mouth, holding it crosswise by the thorax, but almost immediately threw it from him in evident alarm. The beetle had scratched him with his long clawed legs. However, the squirrel renewed the attack and shortly devoured the beetle.

They were much given to play. I have seen the male sit with his legs folded under him in a restful manner while the female played with a crust of bread on the bottom of the cage, rolling over and over as a kitten with a ball. She would also prance about the crust and poke it with a fore paw, as if she expected it to move. Then the pair would have a good-natured wrestling match.

Returning to our wild and semiwild Staten Island gray squirrels, let us hope that they will receive protection. This has been accorded them by many families who have been pleased to have them as neighbors and have enjoyed their company.

The Oriental Sycamore Injured by Cold ¹

WILLIAM T. DAVIS

The severe winter of 1917-18 will long be remembered on Staten Island and its vicinity. Its baneful effect on our local vegetation in killing or injuring many trees and lesser plants was commented upon in the PROCEEDINGS of this society for Oct. 1918 under the heading of The Cold Winter of 1917-18 and Its Effect upon Vegetation on Staten Island, N Y. At that time the statement was made that the oriental plane tree or sycamore (*Platanus orientalis*) had suffered to some extent, and that several had been killed on Hamilton Av. near St. George and on Bay St., Clifton. Since that account was written, more of the introduced plane trees

¹ Read at the regular meeting of the Institute October 20, 1923.

have died, evidently from the injuries received in the cold winter, and an examination of some of the trees still living shows an interesting condition.

On the westerly side of Bay St., immediately south of Slosson Terrace, there are five oriental plane trees that are now about ten inches in diameter near the base. Like the horse-chestnut tree in the grounds of the Public Museum the trunks of some of these trees were split in the winter of 1917-18. Today much of this injury, which has been augmented by fungus, is still very evident and it is of interest that the severe splits in the trunk occurred quite generally on the southerly side of the trees. The first tree has a wide split about four feet long from the ground upward averaging three inches wide; the second tree does not show any split at this date; tree number three in the row is split from the ground about three feet up; in tree four the split commences about one foot from the ground and continues about one foot; tree five has a very wide split on its southerly side averaging about six inches and extending from the base to about seven feet high.

Two trees along the sidewalk on the easterly side of Bay St., Tompkinsville, and opposite the park, show grown over splits on the southerly side. Of six trees on the easterly side of the same street and just north of Hannah St., Tompkinsville, one shows a large split on the south side, and the others show indications of splits in several instances.

In the small triangular park at Stapleton, where once stood the fire alarm bell, there are five oriental plane trees, one of them apparently planted several years later than the others. Two of the older trees are split on the southerly side in the manner already described.

On both sides of part of Vanderbilt Av., Clifton, also along Norwood Av., the next avenue to the south, and other roads near by, there are over a hundred oriental plane trees. Those along Vanderbilt Av. were planted a number of years ago and some of them are now considerably over a foot in diameter near the base. Some of these trees have done well and appear to be in good condi-

tion, but many others are badly injured on the southerly side or show evidence of such injury in the past, now nearly grown over.

Instances of this injury to the oriental plane trees of our island might be multiplied considerably, many instances having been observed that are not here recorded, but enough has been cited to show that Staten Island is probably a little too far north for the best growth of the tree. Our native plane tree (*Platanus occidentalis*) would probably do better, though it unfortunately suffers from the attacks of a fungus, which does not injure the introduced species. A few years ago there was a fine row of these trees along Bay St. near the old time Planters' Hotel on the corner of Grant St. They stood back from the curb, were in prime condition, and were cut down apparently for firewood. They interfered with nothing, and their passing was a loss to the community. For many years an American plane stood at the southerly end of Bowling Green Park, Manhattan, and outlived all of the other trees of its time that had been planted in the park. Likewise there were several that did well in Battery Park. I have not seen any of this species, which is well known to be hardy much farther north, injured by winter weather as are the oriental planes.

This peculiar splitting of tree trunks on the southerly side may occasionally be referred to as "Sun-Scald," a condition among some forest trees when too much cutting out in the woodland has taken place, though this term is also applied to the injury caused by bacteria (*Micrococcus*) on pear, apple, and some other fruit trees.

Polistes Wasps and Their Nests¹

WILLIAM T. DAVIS

In the course of copying the inscriptions on the gravestones in the cemetery at Woodrow, Staten Island, N. Y., with Messrs. R. W. Vosburgh and C. W. Leng, we found on the 25th of May 1922 a small nest of *Polistes pallipes* of about 40 cells, which had been constructed by two females; they had combined to build it and were at the time of discovery on the nest. This nest was on the under side of one of the gravestones that had fallen over, and without meaning to we disturbed the wasps, so that by June 5 they had deserted it. Attached to the stone and near the small and recently started nest of 1922, was the old deserted one of 1921, a considerable structure of five inches in diameter. Lying on the ground and close together were the still older nests of 1920 and 1919, each of which was about three inches in diameter. It was evident that a nest had been built beneath the gravestone during succeeding seasons for at least four years past. Just as a phoebe returns each season and builds its nest in the old site, so succeeding generations of *Polistes* had done and built their nest under the sheltering gravestone.

Again while copying the inscriptions on the gravestones in the old cemetery at New Springville, Staten Island, Oct. 2, 1922, I moved a footstone that was leaning against a headstone, and between the two discovered a nest made by *Polistes pallipes*. About a dozen of the wasps were present, though the nest was empty save for one wasp that had failed to emerge and had died in its cell. It was simply the onetime home of these wasps, and they stayed around. The day was warm and they were active, so when disturbed they all flew away.

On the 18th of October, a cold and windy day, I observed that three of these wasps (all females) were resting in the immediate

¹ Read at the regular meeting of the Institute October 20, 1923.

vicinity of the old nest; two of them on the bare face of the marble gravestone against which the footstone had at one time leaned, and the other at the base of the next gravestone, about one foot away. Thus after sixteen days, though their empty nest and the sheltering footstone were gone, they were attracted to its onetime site and to the place where they were born.

A still greater surprise however awaited me in connection with this nest, for on returning to the cemetery on Nov. 2, following several warm and pleasant days, I was astonished to find a female wasp basking in the sun on the face of the gravestone. Though the empty nest had now been gone for a month, and also the leaning footstone that had given it shelter, she took advantage of some sunny hours to visit the site of her onetime home.

All summer these wasps had their nest on this marble gravestone facing east, and had been contemplating this inscription:

In memory of Mary, wife of Daniel Corson. Died Aug. 15th, 1856, Aged 69 years.

Strangers and friends,
When this you view,
Think on death:
Strive to obtain
The Heaven called New,
Ere you resign your breath.

Natural History Records from the Meetings of the Staten Island Nature Club¹

WILLIAM T. DAVIS

The June 1922 meeting, postponed to July 1, was held at the home of Miss Miriam A. Campbell, 275 Watchogue Road.

Mr. Edward J. Burns gave an account of two screech owls that raised three young in the birdhouse in the *Paulownia* tree in front of the Museum at St. George. The owls have frequented this birdbox for several years. Mr. Burns also exhibited some specimens of sycamore maple twigs with the keys or wings in threes and fours instead of the usual pairs.

Mr. Carol Stryker spoke of his recent visit to the Adirondacks and gave an interesting account of the birds he saw there, and he compared the fauna and flora with that of Staten Island.

Mr. Wm. T. Davis stated that the dragonflies *Anax longipes* Hagen and *Ladona exusta* Say were about the Ink-well Pond near the Moravian Cemetery as in 1921. The latter species has only of late years been seen on Staten Island. On most parts of Long Island this is replaced by *Ladona exusta deplanta* Rambur, a smaller and probably distinct species. He also showed two female *Libellula quadrimaculata* L., taken at Watchogue in open woods near the corner of Lambert Lane and South Av. May 30, 1920, as another rare form locally. A male and female *Dorocordulia lepida* Hag. collected in the Woods of Arden, Eltingville, Staten Island, June 13, 1922, were shown as an addition to the dragonflies heretofore recorded from the island.

Mr. Ernest Beaumont read a paper on the natural history of England, his onetime home, comparing many of the birds, wild flowers and trees, famous in literature, with those of our island.

Mr. Arthur Bell exhibited a fine reel of motion pictures entitled Across the Continent, projected with a small portable machine.

¹ These records have been largely compiled from the minutes of the club, Edward J. Burns secretary.

The Sep. 23, 1922, meeting was held in the Public Museum.

Mr. Edward J.* Burns gave the following account of migrating butterflies:

On the afternoon of Sep. 8th at half past one, while I was going across the bay to Manhattan, a number of butterflies were observed flying toward St. George from Governors Island in a very definite line. During a period of fifteen minutes seven monarch and thirteen cabbage butterflies (*Pieris rapae*) passed over or near the boat, and flew about thirty feet above the water. It is a well known fact that the monarchs migrate to the south in late summer and entomologists have been trying to discover the routes followed by these handsome insects, which are apparently the same every year. Why this is so is not clear because the butterflies being shortlived do not have the advantage enjoyed by the birds, which have the older ones to act as guides. A possible explanation is to be found in the prevailing air currents, which resemble the currents of the ocean and about which much may be learned as aviation advances.

One of the routes probably in general use is from Governors Island and Brooklyn to Staten Island. A large number were observed on the evening of Sep. 12 coming from the direction mentioned and settling down in the trees around the Public Museum and the Staten Island Academy. As many as fifty were counted at one time and many more were already hidden away among the leaves. Many more were to be seen in the trees about Mr. Davis's home on Stuyvesant Place and all the way to Tompkinsville Park, where they gradually settled into the foliage to rest for the next day's flight toward the sunny south.

Mr. Wm. T. Davis exhibited a fine clump of galls, *Cynips strobilana* O. S., of a beautiful reddish green color and about two inches in diameter. It came from a young swamp white oak, its usual host tree, growing in Bucks Hollow. Mr. Davis also exhibited the horsefly *Tabanus bicolor* Wied., and the curious *Mantispa interrupta* Say (Neuroptera), both from Long Island.

Mr. J. E. Logan described a swarm of bees seen by him in Connecticut.

Mr. Edward Avis played several violin selections and imitated the songs of a number of birds.

The Oct. 28, 1922, meeting was held in the Public Museum.

Mr. William F. Davis exhibited a specimen of the Syrphid fly *Microdon megalogaster* Snow (*bombiformis* Townsend) from Fort Wadsworth June 14, 1922. This is an addition to the local list.

Dr. Joseph Bequaert described the peculiar habits of the flies of this genus, the larvae of which live in ants' nests. He gave an amusing account of the mistakes made in the past in describing the peculiar larvae as new species of slugs due to their resemblance.

Mr. Davis also showed the following Noctuid moths and Longicorn beetle as records for the local lists: *Lampra cupida* Grote, collected in September and October; *Lampra brunneipennis* Grote from the Clove Valley, Aug. 14, 1920; and the true *Lampra anchocelioides* Guenée, collected in the Clove Valley July 23, 1911. In the list of the Macrolepidoptera of Staten Island, published in the PROC. STATEN IS. ASSOC. in 1909, these insects were considered under the name *Rhynchagrotis anchocelioides* (*cupida* being placed as a synonym in Dyar's list), but Mr. F. H. Benjamin, who recently examined the specimens, has determined them as above. *Ulolonche modesta* Morrison; two specimens found under a board lying on the ground on the Big Hummock, Watchogue, Staten Island, May 12, 1918. This is an addition to the list. *Xylotrechus aceris* Fisher, described in 1916 from specimens collected in Washington, D. C.; also from Delaware, Kentucky, and Pennsylvania. The beetle was taken at 146 Stuyvesant Place, St. George.

A peculiar fasciated stem of a cultivated geranium grown by Mrs. Edna E. Snow was exhibited.

A Baltimore oriole nest having two openings was exhibited by Mr. Davis. It was collected at Melville, Long Island, Aug. 22, 1922, by Mr. Oscar Heck and preserved by Mr. Frederick M. Schott.

The Nov. 24, 1922, meeting was held in the Public Museum.

Dr. Joseph Bequaert explained in more detail the facts known about the food habits of the fly *Microdon*, the larvae having been observed feeding on the indigestible matter expelled from the peculiar saclike structure in the head of the ants in whose nests they live. Dr. Bequaert also spoke on sleeping sickness, describing the life habits of the tsetse fly, which carries the disease by its bloodsucking habits, and the attempts made to exterminate this serious pest of men and cattle in Africa. The lecture was illustrated with colored lantern slides of the fly and the various kinds of country in Africa where it is to be found.

Mrs. H. M. Trench read extracts from her diary covering a period of a week, in which she described in an interesting manner her impressions of the changing aspects of nature as seen on her daily walks.

Mr. William T. Davis showed a specimen of *Conopholis americana* (L. f.), commonly called squawroot or cancerroot, collected from under a red oak near a branch of the Moravian Brook on Todt Hill. He stated that this parasitic plant had been discovered growing on the roots of this particular red oak over 27 years ago by Mr. John H. Stottler, and was mentioned in Bul. Torrey Club 22:234, 1895, where the statement is made that the patch was about 10 feet square and contained several hundred plants. Since that time the locality had been visited on a number of occasions to ascertain if the parasite still persisted; and specimens collected on September 26, 1897, June 12, 1898, and Nov. 1, 1903, were shown. The red oak still appears to be in a flourishing condition in spite of the presence of the parasitic *Conopholis*.

The Dec. 23, 1922, meeting was held in the Public Museum.

Miss Katharine Trench reported having seen two starlings carrying nest material on December 9th and the return of the cardinal which had visited her feeding station during previous winters.

Mrs. H. M. Trench spoke interestingly of her experience raising honeybees, describing their habits and the exciting times of

swarming, when they require great watchfulness to prevent the new colony from escaping to the woods.

Mr. Charles W. Leng exhibited a specimen of a lichen, *Parmelia* sp., brought into the museum by Carlton Biel, who had taken it off a Christmas tree indicating the probability that the tree had come from Maine or a neighboring state.

Mr. Wm T. Davis exhibited specimens of *Longistigma caryae* (Harris), a plant louse that he, Dr. Joseph Bequaert, and Dr. James P. Chapin had found Nov. 12, 1922, on two small black-jack oaks (*Quercus marylandica*) on the sand dune near the Big Hummock, Watchogue. He stated that as the leaves were off the trees and the insects quite large, they were conspicuous. They had laid many eggs along the under side of the branches. These were generally placed lengthwise and three or four abreast. A larva, probably that of a Syrphid fly, found among the plant lice, was also shown. In confinement it had killed all of the lice in the same box. Specimens from these colonies had been identified by Miss Edith M. Patch and also by Mr. Frederick M. Schott. *Longistigma caryae* has been recorded from several species of hickories, from black walnut, and also from linden, but apparently only from *Quercus marylandica* among oaks. Mr. Schott however states that he has found it on other species of the red oak group.

The Jan. 26, 1923, meeting was held in the Public Museum.

Mr. Charles W. Leng read a recent article from the Staten Island Advance, by Dr. A. W. Callisen, on wild life about home, describing the actions of a little rabbit, which came to a cabbage patch in a yard in the midst of a thickly settled part of the island.

Mr. Wm. T. Davis called attention to the recently issued U. S. Dep. Agric. Bul. 891 on the Green June Beetle, *Cotinis* (*Allo-rhina*) *nitida* L., and stated that in some parts of the south it is called the "juney bug" and often used as a plaything by the children. He showed one found in Virginia that had flown away after having been tied by the leg with a piece of thread, which later became entangled in a tree, where the beetle died. He also

stated that on July 11, 1922, when near the golf links on Todt Hill, he had seen a swarm of *nitida* of about 30 or 40 individuals flying about or resting on nearby plants. The center of attraction seemed to be some very old cow manure that had been thrown on a bank by the side of the lane. The area was about a yard square, and here the beetles had made numerous holes as they burrowed out of sight beneath the surface. A series of five, collected at the time on account of color variation, ranged from having the upper surface almost wholly green to one with the head and pronotum green and the elytra almost entirely brown. At times and places, particularly in the south, this species, both as larva and adult, becomes a serious pest to the farmer. In the PROC. NAT. SCI. ASSOC. STATEN IS. 8:19, June 8, 1901, Mr. Walter C. Kerr reported upon a swarm of *nitida* seen by him about a bed of cannas at Dongan Hills June 7, 1900.

The meeting of Feb. 23, 1923, was held at the residence of Mr. Charles W. Leng, 439 Clove Road, West New Brighton.

Mr. Ernest Beaumont showed a living caterpillar of the "woolly bear," *Isia isabella*, found that day walking about.

Miss Katharine Trench recorded the presence of a flock of American crossbills about her home at Green Ridge and the finding of a dead female of this species sitting upright on a vine on January 30.

Mr. Wm. T. Davis stated that on Feb. 11, 1923, he and Dr. James P. Chapin visited Long Beach, Long Island, during a snowstorm. They walked about 3 miles east, and saw a few birds, but on the return trip, when the sun was out and it was calm and warmer, the savanna sparrows, Ipswich sparrows, and particularly the horned larks, appeared in far greater numbers; they do not frequent the beach to any great extent during a storm.

Mr. Davis read portions of an article on Spiders as Fishermen, by Dr. E. W. Gudger, from Nat. Hist. 22: 565-568, 1922, including the reference to the spider *Dolomedes sexpunctatus* seen to catch a small silvery fish about an inch and a quarter in length

on May 10, 1800, in a small woodland pond near Grasmere, Staten Island. This incident was recorded in Entom. News 2:27, April 1891, under the heading A Spider Fisherman. The spider, and the fish since identified by Mr. John T. Nichols as *Atherinus crysoleucas* Mitchell, have been carefully preserved for over 32 years and were shown to those present. There have not been many records of spiders as fishermen, and only five instances are recorded in the vast literature of fishes and fishing brought together in the Bibliography of Fishes of which Doctor Gudger is one of the editors.

Mr. Davis also called attention to the article on The Forests and Some Big Trees on Long Island, by Norman Taylor, Brooklyn Botanic Garden Leaflets Ser. X, Oct. 4, 1922, wherein the folly of the careless destruction of the timber of the island is referred to, the magnificent forest growth of the protected Gardiners Island is mentioned, and some of the very large trees of both islands are recorded. It appears that the largest tree was a "black walnut that stood until a few years ago on the William Cullen Bryant place at Roslyn, and was reported as twenty-nine feet in circumference." The largest living trees of record are a sycamore 21 ft. in circumference on the property of James N. Hill, at Wheatley, and a white oak 19 ft. 7 in. in circumference on the farm of Paul Costermale, at Stony Brook.

In the PROC. NAT. SCI. ASSOC. STATEN IS. for Feb. 12 and March 12, 1887, some local trees of large size are mentioned, all of which have since been destroyed. The largest was a chestnut 18 ft. in circumference that stood in a protected hollow just north of where the Old Town Road joins the Fingerboard Road. What remained of this tree was photographed in March 1910. The second in size was a spreading white oak 17 ft. 8 in. in circumference that stood in a field near the railroad station at Garretsons, now Dongan Hills; and the third a chestnut 17 ft. 6 in. in circumference that grew near the Old Town Road. There is a tradition of an enormous oak cut for ship timber at Rossville many years ago, on the stump of which a tall man could lie at full length.

This was probably one of the monarchs of the virgin forest of our island.

Mr. Charles W. Leng exhibited a number of boxes of beetles from his extensive collection and recounted many things of interest concerning them.

The March 24, 1923, meeting was held in the Public Museum.

Mr. Carol Stryker recorded having first seen robins and bluebirds this year on March 4, redwinged blackbirds on March 10, and purple grackles on March 11.

Mr. Wm. T. Davis recorded a specimen of the butterfly *Grapta comma* seen on Howard Avenue March 22.

Mr. Charles W. Leng gave a lecture on the Mammals of Staten Island illustrated by lantern slides recently made for the museum. The common domestic animals, such as cows, dogs, and cats, were shown, followed by pictures of the wild mammals. Special attention was given to the fact that small mammals such as mink and muskrats, together with several species of mice, are still to be found on the island despite its thickly settled condition. The desirability of securing exact records of these animals as they exist today was pointed out.

The April 27, 1923, meeting was held in the Public Museum.

Mr. Wm. T. Davis and Mr. Edward J. Burns reported seeing two Wilson snipe in a small marsh near Rockland Av. on April 1.

Mr. Carol Stryker reported the presence of a clump of *Hepatica* near the Bird Club Cabin. This is of interest owing to the almost complete extinction on the island of this plant due to forest fires.

April 20 was generally reported as being a most interesting day in the number of birds seen.

On April 27 the introduced beetle *Carabus nemoralis* was found on the grounds in front of the Museum.

A large drawing of all the species of Staten Island turtles, made by Mr. E. St. C. Jeans, to be photographed for a lantern slide, and a colored wax cast of a large gartersnake, made by Mr. Edward J. Burns for museum exhibition, were shown.

Mr. Wm. T. Davis called attention to the great destruction of the vegetation and soil of the island by the many fires of Sunday April 22. The circumstance of a gale of wind, dry conditions of the countryside, and a Sunday, occurring together, produced the usual result so far as Staten Island is concerned. Numerous persons set fire to their yards, to the grass of the hillsides, and to the woodland, with the result that many destructive fires were in progress throughout the day, and in several instances the fire department was called upon for aid in saving fences and buildings.

These fires are often started with the mistaken idea that some benefit results therefrom. It is true that for one or two years the grass may come up greener, but unless fertilizer is applied, which is not ordinarily done, the soil is just as certainly destroyed as if a fence or other structure had been consumed. As to woodland thickets and the woods themselves, there would seem to be but one conclusion. If our citizens as a whole really cared for the beauties of nature and took an interest in the trees and lesser plants and flowers individually, the next woodland fire on our island would be considered a misfortune. Anyone who has watched the gradual disappearance of our onetime extensive flora can not but lament the deliberate choice of a majority of the people in favor of destruction as opposed to conservation. There are several places remaining under strict protection, where these woodland fires have been prevented, and anyone may compare the result of the fires started by themselves with the varied, interesting and beautiful conditions to be found in the unburned areas.

These observations seem trite and self-evident to any real admirer or student of nature but in this matter we are confronted by the progress of ignorance.

The meeting of May 25, 1923, was held in the home of the Staten Island Historical Society, the old Perine House, 1476 Richmond Road.

Mr. W. Lynn McCracken read a letter from the Russell Sage Foundation assuring cooperation in the effort to decrease the number of brush fires on the island and reported that the South

Shore Protective Association is actively working for protection of the woods.

Mr. Wm. T. Davis reported the occurrence of a weasel on Staten Island, seen by him while with Dr. James P. Chapin near a swamp between Merrell Av. and the Turnpike on May 13. This is the first weasel to be reported from the island in a number of years. Thirty-five species of birds were seen on the same day.

Mr. Edward J. Burns reported a monarch butterfly, *Danais archippus*, on May 17, near the American Museum of Natural History, not an early record but of interest due to the lateness of the season.

Miss Miriam A. Campbell reported a whip-poor-will near the Bird Club Cabin on April 13.

Mrs. H. M. Trench stated that she had observed some English sparrows eating aphids in her garden, and commented on this example of usefulness in this bird.

Mrs. Edna E. Snow told of a robin nesting over the porch of her home, University Place, Brighton Heights.

The Sep. 22, 1923, meeting was held in the Public Museum.

Miss Katharine Trench exhibited a young box tortoise recently presented to the museum. This turtle is becoming rare on the island and small ones are not often found.

Mr. Edward J. Burns showed five specimens of Oestrid fly larvae taken from the skin of a raccoon he had prepared at the American Museum on Aug. 22, 1923.

Mr. Carol Stryker exhibited photographs of various scenes and places taken during his summer trips and described in detail the beaver dams he had seen in the Adirondacks.

Mr. Wm. T. Davis showed four Staten Island specimens of the beautiful butterfly known as *albofasciata* Newcomb, a highly variable form of *Basilarchia astyanax* Fab., a common brilliantly colored bluish species, the caterpillars of which feed on willow, wild cherry, shadbush, plum, apple, etc. The specimens exhibited were as follows:

Female from Woodrow Aug. 25, 1907 (Skinner and Chapin).

Male, Staten Island Aug. 22, 1915 (O. Fulda).

Female, Ft. Wadsworth Sep. 4, 1917 (E. J. Burns).

Male, Stuyvesant Place, St. George, August 14, 1923 (Lucy and Frances Anderson).

The last mentioned is in the collection of the Staten Island Institute and is quite likely the individual seen on Hyatt St., St. George, on August 13, when it was examined at close range by Mr. Davis and Mr. Leng. A few days later, namely on August 25, a fine specimen of *albofasciata* flew across South Av., near Lambert Lane, and was seen by Mr. Davis and Mr. Ernest Shoemaker. Search was made for it in the nearby woods to which it was blown by a strong wind, and though many *astyanax (ursula)* were found feeding on the over-ripe fruit of a wild cherry, nothing more was seen of the *albofasciata*. Mr. Davis showed the insect journal Psyche for Feb. 1904, containing the paper Problems in the Genus *Basilarchia*, by W. L. W. Field, and for Oct. 1907, containing the original description, on page 90, of the variety *albofasciata*, and pointed out that Mr. Newcomb mentioned Staten Island as one of the localities where his newly named form was to be found.

Another butterfly of interest appearing in some numbers on Staten Island this past summer was *Chlorippe clyton* B. & L., the caterpillar of which feeds on the hackberry or *Celtis*. On the walk of the Bird Club July 14 Mr. Cornelius Denslow found one of these butterflies laying eggs on a hackberry tree near Richmond, and on a neighboring tree the beautiful green chrysalis of a second specimen, since presented to the museum. On Aug. 17 Mr. Davis saw a *clyton* butterfly in Richmond village, and on Aug. 31 he captured one sitting on a gravestone in St. Andrew's churchyard, Richmond. There are a few earlier records for the insect on the island.

Mr. Davis stated that on Sep. 1, 1923, he and Mr. Frederick M. Schott had discovered a nest of a black-billed cuckoo in a low tree in dense growth near Bulls Head. The nest contained one

young a few days old, covered with whitish down, and also one egg. That this species and the yellow-billed cuckoo may have young and unhatched eggs in the nest at the same time is well known, but the late nesting date here recorded is of interest. Thomas Nuttall in his Popular Handbook of the Birds of the United States and Canada mentions as of interest a nest of the yellow-billed cuckoo that he found on Aug. 28, for it as well as the black-billed species usually nest much earlier, as the birds depart for the south in the month of September.

The Oct. 27, 1923, meeting was held in the Public Museum.

Mr. Charles W. Leng read a newspaper article by Mr. P. L. Sperr on muskrat trapping on Staten Island.

Dr. A. W. Callisen read a paper: American and English Rural Life Compared. Having spent a number of years in rural England, as well as having been a farmer in New Jersey, Doctor Callisen was able to give an authoritative comparison and especially emphasized the stability of the English yeoman as quite contrasted to the changing ideas and methods of American farmers. The deplorable condition of the farm worker in England in the past, compelled as he was to labor twelve, fourteen, or more hours a day by the farmer, who in turn was taxed to the last degree by the landowner, was commented upon, as was the inability of the farmer to prevent the crops from being ruined by the deer kept on the lord's estate for his own pleasure. Contrasted with this was the American farmer who lived and thought in an opposite way and insisted upon his rights, as exemplified in the case where a farmer and his son, armed with shotguns, held off the hunt of the Meadow Brook Country Club and threatened legal action if they trespassed on his land.

Mr. Wm. T. Davis exhibited mounted specimens of the following plants from Staten Island: *Quercus ilicifolia* Wang. from Watchogue. A number of young scrub oaks of this species still exist in three nearby localities in spite of many destructive fires. Also several of the hybrids (*Quercus brittoni* Davis) between this and *Quercus marylandica* are to be found at the locality where they were discovered in 1892 (PROC. NAT. SCI. ASSOC. STATEN Is. Sep. 1892).

Morus rubra L. A fine red mulberry tree about ten inches in diameter was found in the woods near Merrell Av. and Bulls Head, Sep. 1, 1923. Several other smaller trees are to be found in the woods west of the fireworks establishment, Graniteville.

Hottonia inflata Ell. Several plants of this interesting species were found in a ditch on the easterly side of South Av. near Travis Av. June 2, 1923.

Cynanchum nigrum L. The black swallowwort, collected in the old Ross place at Rossville. It was found in the same locality in 1903 (PROC. NAT. SCI. ASSOC. STATEN IS. May 1903) and is now much more abundant there than it was twenty years ago. Many of the plants had both well grown seed vessels as well as flowers on July 8, 1923.

Mr. Davis also showed a living female mantis, *Paratenodera sinensis*, that had been found at St. Paul's church Oct. 21, 1923. On Oct. 25 the insect laid an egg mass, which was also shown. On April 26, 1921, sixty-one egg masses of this species were placed in several localities on Ward Hill, since which time the insect has become well established and attracted some attention.

The Nov. 25, 1923, meeting was held in the Public Museum.

The effect of aspirin tablets on cut flowers was generally discussed, and the remarkable property of this drug in reviving flowers as found at the last flower show in the Museum was spoken of by Mr. Leng.

Mr. Wm. T. Davis spoke of the interesting items of natural history observed in the course of gathering stones used in building the fireplace in the Bird Club Cabin. He stated that about noon on Nov. 14, when it was warm and pleasant and peeper frogs were singing, that he, Mr. H. F. Stone, and Mr. Carol Stryker were surprised to see a painted turtle on its way through the dry woods to the pond near the Cabin. It probably had started from the small lily pond on the hill several hundred feet away and was making for the deeper and larger pond and a much better place in which to spend the winter.

Mr. Carol Stryker recorded the discovery of some persimmon

trees in the Vanderbilt Mausoleum grounds. They are now quite large and grow among planted vegetation.

Mr. Charles W. Leng exhibited a collection of small water beetles of the family Haliplidæ, and spoke of their structure and habits.

Dr. A. W. Callisen stated that last summer he had seen two turkey buzzards near Pleasant Plains. He added that during the 12 years he spent on his farm near Princeton, N. J., he had studied the habits of this bird with much interest:

The first warm days of April invariably brought a pair which returned year after year, and their advent was always hailed with joy by the family. Nothing can exceed the grace of the buzzard's flight. With serrated wings widespread he circles high over the fields, now rising now falling, yet with no apparent motion of his great flexible pinions, and he will sail around and around in a restricted area for hours at a time, casting his shadow like a cloud on the waving fields of grain below him. Being gregarious there are always two, and sometimes half a dozen or more of these great birds wheeling through space, and apparently abandoning themselves to their aerial pastime with tireless ecstasy. It has been suggested that what must appear a surfeit of exercise is taken to aid the digestion of the enormous amount of carrion frequently bolted, and this would appear to be true as they will cover the same region for hours.

This poetry of motion is utterly belied however, by their terrestrial habits as scavengers, for nothing is too putrid or vile for their rapacious appetites. On my farm I raised hundreds of chickens, ducks, and geese, and whenever one of these died as poultry will, it was thrown in an old orchard for the buzzards who never failed to make short work of it. One summer several of our pigs succumbed to hog cholera, and these were dragged to a distant field by the edge of the woods, where the buzzards promptly devoured them and picked the bones as clean and white as if they had been purified by an antiseptic. Armed with an opera glass I frequently watched these greedy birds at short range gorging themselves, a disgusting but by no means uninteresting sight.

When disturbed in the ghoulish repast, they expressed their displeasure by lifting their wings in a threatening attitude, at the same time making a hissing or grunting sound which seemed

to issue through the nostrils. With a huge warlike beak and claws capable of inflicting painful injury they never made the least attempt to defend themselves, but disgorged the foul and maledorous contents of their stomachs on the intruder, squirting it forth with so well directed an aim as to make this loathsome mode of defense most effective. This horrible method is practiced by the youngest fledgeling, so that their nests are seldom disturbed.

Back of the farm was a dense forest extending for many miles, and I noticed that as night approached the buzzards flew in that direction evidently to roost. After some trouble I discovered that they invariably spent the night on the same giant tree, a sycamore long since dead and standing in a little clearing, and noting the hour of their flight secreted myself and watched their roosting. First a pair arrived in company and alighted on one of the middle branches. After much flapping of wings and unrest they finally settled down, and stretching their bodies after the manner of turkeys, walked along the limb outward till they reached the chosen spot. Some others arrived and after considerable restlessness settled on the same branch, and it was ludicrous to observe how the earlier arrivals disturbed by the shaking of their perch resented this intrusion through grunts and hisses.

When wet by a passing shower they will sit on a fence with outstretched wings literally hung up to dry, and at times they will perch on the kitchen chimney in a like attitude for the necessary warmth if it be a cool day.

The Dec. 22, 1923, meeting was held in the Public Museum.

Miss Anna King reported a dandelion in blossom at Arrochar on Dec. 15. Mr. Ernest Beaumont reported having seen a painted turtle in Cameron's pond on the same date.

Mr. Edward J. Burns reported finding the large and beautiful beetle *Cychrus viduus* under a log, together with some snails, on which it feeds, while he and Mr. Davis were searching for salamanders on Nov. 29. But two examples of this species have previously been reported from Staten Island. Mr. Davis exhibited the beetle, which had been kept alive in a large jar with soft moist earth at the bottom and a piece of bark under which it could crawl. Before the insect discovered the bark, it dug out of sight in the soft earth during the day but, at evening would come from its hiding.

The beetle supports three fully grown parasitic mites that also become active at night and run about on their host. The *Cychrus* becomes easily excited and stridulates by rubbing the last two segments of the abdomen against the sides of the elytra after the manner described by Mr. Louis Joutel in Jour. N. Y. Entom. Soc. Oct. 6, 1903. When disturbed on the present occasion the insect stridulated so that those present could hear it, and the mites were active as described.

Mr. Wm. T. Davis also exhibited a male of our largest species of grasshopper, *Schistocerca americana*, which may have a wing expanse of as much as five inches. It is not known to breed on Staten Island but flies up along the coast from the south. The insect was found among the growth of honeysuckle in the woods on the northerly side of the Moravian Cemetery on Nov. 27. When disturbed it flew from the ground into a tree, where it was captured. This species has been found on the island during ten different years dating back as far as 1882 when three specimens were collected in November. It has been twice found in December but may also occur in May, and it is more often met with near Tottenville than on the northern part of the island.

Mr. Howard H. Cleaves showed a number of lantern slides, illustrations of the scenery of California and West Virginia as well as of the mammals and birds that he had met with in his travels. He also spoke of the presence of longeared owls in the hemlocks at the Moravian Cemetery in past years apropos of the finding of six of these winter visitants in the cemetery this year on Dec. 15 as reported by one of the members.

The Jan. 26, 1924, meeting was held in the Public Museum.

Mr. Carol Stryker recorded an olive-backed thrush in the Moravian Cemetery Jan. 26, 1924. He also exhibited some eggs recently laid by the snapping turtle owned by the museum.

Mr. Wm. T. Davis offered the following memorandum:

Walking across the golf field on my way to the Bird Club Cabin on the 27 of November I observed how the seeds from the tall tulip tree standing by the path on the edge of the field were

distributed over the lawn to the eastward by the strong westerly and northwesterly winds. Close to the tree the lawn was thickly strewn with the seeds, which gradually diminished in numbers as one walked away to the eastward until they were hard to find. The last one, as I subsequently discovered by measurement, was between 700 and 800 feet from the parent tree. No doubt under the influence of a very strong gale they would be carried to about 1000 feet, and yet an examination of an individual seed would hardly indicate it to be so good a flier before the wind.

This particular *Liriodendron* is very healthy, for the carpels examined contained two seeds each. Often there is but one seed and sometimes none.

Dr. A. W. Callisen exhibited some amber containing insects.

At the close of the meeting a box addressed to the Nature Club from Mrs. E. E. Snow and Mrs. E. A. Stott, then in Florida, was opened. It contained in addition to citrus fruits of several kinds many natural history specimens of interest, including pressed plants and seashore material.

The meeting of Feb. 23, 1924, was held at the home of the president, Miss Miriam A. Campbell, 275 Watchogue Road.

Communications from Mrs. E. A. Stott, Mr. Edward Avis, and Prof. W. S. Wright of San Diego, Calif., were read.

Mr. Wm. T. Davis reported the six longeared owls still in the hemlocks in the Moravian Cemetery on Feb. 3. On that day too he and Mr. Cleaves while putting out a brush fire discovered a meadow mouse that had its tail and one ear badly burned, also some of the fur on its back. It lived in captivity almost a week and then died from some unknown cause. It was a ravenous eater and consumed much bread and apple peel.

Miss Katharine Trench reported violets in bloom at Green Ridge Dec. 25, jessamine Jan. 1, 1924, and skunk cabbage well above ground on Jan. 28. She heard the first songsparrow singing on Feb. 2.

The March 22, 1924, meeting was held in the Public Museum.

Mr. Wm. T. Davis exhibited the female *Cychrus viduus* captured by Mr. Burns and shown at the meeting of Dec. 22. The

three large mites that were on the beetle in November had disappeared, but there were many immature ones still present. The parasitic mite *Gamasus antennaepes* Say, collected on Staten Island in 1880 on the beetle *Passalus cornutus*, was shown under the microscope. The *Cychnus* is being fed on molasses.

Mr. Carol Stryker exhibited the salamander *Triturus viridescens*, which seems to be common on the island only in the ponds in the vicinity of the Moravian Cemetery.

Mr. Charles W. Leng exhibited photographs of the beach at Eltingville taken by Mr. P. L. Speer on March 8, 1924, the occasion of an unusually low tide which exposed much of the beach generally under water.

Miss Katharine Trench exhibited a split cedar log containing numerous seeds probably placed there by mice.

The meeting of April 26, 1924, was held at the home of the president, Miss Miriam A. Campbell, 275 Watchogue Road.

This meeting being the fifth anniversary of the founding of the club, a photograph of some of its early members was shown, as well as a printed record of its proceedings taken from the PROC. STATEN IS. INST.

Mrs. H. M. Trench recorded a flying squirrel captured by a friend in a "catch-'em-alive" trap on Richmond Hill. The papers on jars of jam stored in a closet had been removed and the jam eaten. At last the squirrel was caught but escaped. In due time it returned, was recaptured, and is now being retained as a pet.

Mr. Carol Stryker gave an account of the capture of a European ferret at Cherry Lane and Manor Road. The animal is on exhibition in the museum, is quite tame, and feeds on eggs, milk, and meat.

Dr. A. W. Callisen read a paper on the woodchuck as observed about his farm near Princeton, N. J., and at Oyster Bay, Long Island:

The woodchuck is a gentleman of the old school who thoroughly believes in leisure and of all animals is perhaps the least industrious except when engaged in digging his hole, when he works away at a tremendous rate until it is finished.

He feeds in early morning, may on occasions be seen sunning himself at noon and once again, late in the afternoon, he comes abroad and feeds heartily till sunset when he descends for the night. He is not nocturnal and probably sleeps soundly till sunrise. This I have frequently tested by scattering light ashes and sand about the various entrances to his burrow, but there were never any tracks to show activity by night.

I do not believe that as a usual thing the woodchuck goes farther from his den to feed than necessary, and I found in most cases that the various entrances were connected with well beaten paths not extending far afield, which would indicate this habit. But when the grass is high and affords shelter he will slip about farther from home, passing from clover clump to clover clump, and if near the garden will even nibble the tender inside of cabbages, strip the leaves from the young bean plants, or feed on the succulent early corn. In autumn he seeks a nearby orchard, for he is fond of apples, pears, or sweet fruit of any kind, and it is here where he is most commonly caught in the open, sitting bolt upright from time to time to look about him.

His attitude toward his enemies is one of obstinate defiance, and when cornered he shows plenty of pluck. When pursued he scrambles in frantic haste for his burrow, his black heels twinkling as he goes, and before his final disappearance is apt to turn and chatter defiance.

During the summer months I frequently came across little woodchucks only a few weeks old, wandering about the fields all alone and unprotected. Their parents seem to be utterly lacking in family instinct in this respect, driving the young ones from home to shift for themselves as soon as weaned.

I have often caught these little chuckies, chiefly to protect them from my dogs, but they are terrible biters and will charge at any one attempting to molest them. When finally convinced that resistance is useless, however, the little creatures will crouch in the grass and begin to tremble and shake all over and surrender completely.

Attention was also called to the woodchuck of the forest that may be seen scampering over fallen tree trunks and through dense underbrush, where he feeds for the most part on berries when in season and on tender growths and roots.

Personally I feel a deep sympathy for all wild creatures, and

the woodchucks on my farm were as safe as I could make them. In return I was amply rewarded by watching their life and habits, and in this way grew closer to my humble little tenants.

The meeting of May 23, 1924, was held in the Bird Club Cabin in the woods near the Moravian Cemetery.

While supper and coffee were being prepared two black ducks came to the pond in front of the cabin. One of the birds flew away directly, whereupon the remaining one quacked loudly for some time. After swimming about a while it too flew away.

Mr. Wm. T. Davis and Mr. Howard H. Cleaves gave a list of the 35 birds they had seen that day, mostly in the Clove Valley. There were a considerable number of olive-backed thrushes. The most interesting was a female chewink that uttered a series of low notes quite different from the usual ones familiar to them.

Mr. Davis stated that his earliest date for a monarch butterfly this year was May 5, Tottenville, where he had seen two. On May 6, he had seen another at St. George.

Mr. Charles W. Leng gave an account of the explorers of the Antarctic from the early voyages of Magellan and Cook to those of Shackelton, Scott, and Amundsen.

Mr. C. J. Albrecht of the American Museum of Natural History described his experiences in Bering Sea and also above the Arctic Circle in 1913 on an expedition in quest of natural history specimens.

Literature Relating to Staten Island

SOME DISEASES OF TREES IN GREATER NEW YORK, by Arthur Harmount Graves, *Mycologia* **11**: 111-124, *pl.* 10, May 1919.

Those of us who have noticed the conspicuous tree mortality on Staten Island and in its vicinity in recent years, especially in connection with certain species such as sweet birch (*Betula lenta* L.), beech [*Fagus atropunicea* (Marsh.) Sudw.], white oak (*Quercus alba* L.), cultivated cherry (*Prunus avium* L.), etc., will find a great deal of interesting and enlightening information in this article. Insect pests are not mentioned, probably because they can not be properly regarded as diseases. Fungus infection, however, representing a true pathological condition, is discussed in connection with a number of hosts and parasites. Incidentally, also, the author lays great stress upon the disastrous effects of the unprecedented low temperatures of the winter of 1917-18, to which he ascribes in large measure the weakening of vitality in many trees, and their consequent susceptibility to infection and their rapid yielding to its effects.

Following are items, in which reference is made to Staten Island:

On page 118, under the caption Heart Rot of Oak and the sub-heading *Globifomes graveolens* (Schw.) Murr., the author states that "in a forest of oak, sweet birch and red maple, near Mt. Loretto, Staten Island, a red oak (*Quercus rubra* L.) . . . had recently been broken about 12 feet from the base and blown over. . . . Scattered along the surface of the bark . . . were four fine specimens of this fungus, an organism which is of rare occurrence in North America, and never before found in this locality." The specimen mentioned is illustrated in *pl.* 10, *f.* 3 (*loc. cit.*).

On page 119, in connection with a description of *Inotus hirsutus* (Scop.) Murr., it is stated that "a tree of black oak (*Quercus velutina* Lam.) in a forest on Staten Island was found badly diseased, evidently through the action of this fungus. . . . Dr. Murrill says that the species is rare in this country, but common and viru-

lent in Europe. . . ." The exact location of the diseased tree and the woodland in which it was found is not given.

On page 121, under the caption Disease of the White Oak (*Quercus alba* L.), it is stated that "all over Staten Island the white oaks of large size were found to be dying out. This was not due to the severe winter preceding . . . the trouble has been going on for several years. There was no patch of forest in which the dying and dead trees could not be seen on every hand. Rhizomorphs (possibly of *Armillaria mellea* (Vahl) Quélet) were found under the bark of many, but not all trees. It seemed as if the larger trees were the ones that were affected. In some instances traces of a boring beetle were seen."

A. H.

THE NORTH AMERICAN SPECIES OF PARASITIC TWO-WINGED FLIES BELONGING TO THE GENUS PHOROCERA AND ALLIED GENERA. Proc. U. S. Nat. Mus. 63: 1-90. 1924.

In this paper by J. M. Aldrich and Ray T. Webber, treating some of the Tachinid flies that parasitize caterpillars, etc., there is described as new *Zenillia angustivitta*, type and only locality Staten Island, N. Y. Our entomologist Wm. T. Davis is in the same paper credited with the capture at West Hills, Long Island, of another species. The size of the flies referred to in these notes is less than half an inch but they are of economic importance as well as scientific interest because they help to check the spread of injurious insects.

C. W. L.

THE LOBSTER FISHERY IN NEW YORK BAY, by S. A. Callisen, in Zoological Society Bulletin 25⁶: 144-7. Nov. 1922.

This is a well written article describing the methods, profits, etc., of the industry in which it is said that about 63 boats are in use, of which three hail from Princes Bay. The speed with which the boats travel is noteworthy and indicates more romance than might be associated with an ordinary avocation: "When travell-

ing at full speed the bow rises and so much water is thrown to each side, that in a choppy sea one has an impression of whizzing along between solid walls of water."

C. W. L.

FRENCH BLOOD IN AMERICA, by Lucian J. Fosdick, Boston 1906.

This interesting volume of 448 pages contains numerous references to Staten Island. Beside the one indexed on p. 217, other references occur on p. 286, 373, 311 (Anthony [Duché] came to Staten Island at an early date and removed to Philadelphia a few years prior to 1700), 160 ("Laurentius Van den Bosch, more properly Laurent du Bois, . . . was called to minister in . . . Staten Island"), and perhaps elsewhere. Mr. Fosdick's volume omits, however, many French names occurring on Staten Island. As a result of investigations conducted by Mrs. Marie Burt Tefft in preparing for the Huguenot-Walloon Tercentenary Celebration the following list was prepared: Androvette, Beaumont, Bedell, Belleville, Billiou, Bodine, Bonney, Bonrepos, Breton, Britton, Bitten, Campion, Cannon, Casier, Chappelle, Chatteayne, Colon, Corne, Corssen, Cortelyou, Cresson, Crocheron, Cropsey, DeBost, DeCamp, DeJonge, Delavan, DeMarest, DeMandeville, Denton, DeNyse, Depuy, Didier, Disosway, DuBois, Duché, Duryée, DuShane, Eynard, Fauconnier, Ferré, Fitchet, Fontaine, Gano, Gitou, Guyon, Hillyer, Jaubert, Jaques, Joline, Journeay, Laforge, Lambert, Largy, Larzelere (La Resilier), Latourette, Laurens, LeConte, LeGrand (DeGroot), LeGuine (Seguine?), Mahault, Manee, Marche, Marlett, Martineau, Martling, Mebane, Merrill (DesMerle), Mersereau, Mesier, Micheau, Morgan, Musson, New, Pereau or Pero, Perine, Poillon, Pudín, Regrenier, Rezeau, Richon, Rider, Rutan, Seguine, Sharrett, Simonson (LeBlanc), Targee, Tillou, Tuenire, Vincent, Wantier, Wanty, Wiant. This list is not intended as authoritative and complete.

C. W. L.

THE NEW YORK HISTORICAL SOCIETY COLLECTIONS 1921, 1922, 1923, COMPRISING CADWALLADER COLDEN PAPERS, v. 5, 6, 7.

These contain references to Staten Island as follows:

V. 5, p. 95: "one Cornelius who said he was brought up on Staten Island, that he had been at Braddocks defeat and shewd her some linnen which he said was part of the booty," and p. 97: "The last Scalps she saw brought in was by the afore mentiond Cornelius, they were the Scalps of an old man a Woman and boy who they had killed at Schohary on Susquehana River." These passages occur in the affidavit of Margery West, a white woman who was a prisoner among the Indians near what is now Athens, Pa., in 1756.

V. 6, p. 56, 57, 65, 71, 72, 73, 76, 78, 80, 82, 84: Numerous letters from Gen. Jeffery Amherst relative to British Encampment on Staten Island from July to October 1761. The general planned "to Avoid as Much as possible taking any of the Ground, on which the Corn may be still standing, or any other that may prove Essentially Inconvenient to the proprietors thereof." That his plans were not successful, however, may be inferred from a letter dated Oct. 6, 1762, from Archbishop Secker to Rev. Dr. Johnson (Doc. Col. Hist. 7: 508): "and I think I have secured from the crown 170¹¹ for the damage done by the soldiers to M^r Charltons Glebe in Staten Island."

V. 7, p. 193 and 197 describing the province of N. Y. says of Richmond County: "well filld with Inhabitants; no large Tract of usable Land being . . . without Cultivation."

C. W. L.

THE NEW YORK HISTORICAL SOCIETY QUARTERLY BULLETIN.

This publication has recently contained many items of interest to Staten Island.

V. 5, p. 100, illustrates military buttons found at British fort at Richmond; others are illustrated in v. 7, p. 56; and the text shows the work done by Mr. W. L. Calver and others in excavating for

such relics. Mr. Calver, we are glad to say, has given an interesting collection of the buttons and other articles to our museum. The list of American Revolutionary Diaries, v. 6, p. 60, gives reference to Lieut. Constant Freeman's service on Staten Island in 1780; p. 104 to Ensign Andrew Lee's service; p. 106 to Jos. P. Martin's service; v. 7, p. 35 to Oliver Woodruff's service.

Old New York Inventories of Estates, v. 6, p. 134-7 include the names of Beek, Cole, Crocheron, Hillyer, Johnson, Laforge, Lake, Leconte, Lokerman, Perine, Poillon, Prior, Rezeau, Swain, Tysen, Van Ame, Veghte.

Colonial Commissions in v. 7, p. 123-7 also cover Staten Island.

C. W. L.

THE QUARTERLY JOURNAL OF THE N. Y. STATE HISTORICAL SOCIETY, April 1924.

This reflects the activity of Staten Island's historians in five paragraphs, viz: p. 202, Mr. Royden Woodward Vosburgh's *The Settlement of New Netherland 1624-1626*; p. 212, the same author's typewritten copies of church records and gravestone inscriptions; p. 212, the MUSEUM BULLETIN's picture of the Britton Cottage; p. 220, the pillar in honor of Pierre Billiou; p. 193, Mrs. Oscar F. Moore's paper on *The Spirit of American Women during the Revolution*.

C. W. L.

THE STORY OF THE WALLOONS, by William Elliot Griffis, Boston, and New York 1923.

This volume contains a chapter, *The Island of the States*, devoted to Staten Island, in which the part taken in its settlement by the Walloons is treated with much emphasis. Some statements made by Dr. Griffis are, however, apparently based upon tradition rather than documentary evidence, as for instance, on p. 204: "Domines Michælius and Drisius . . . visited them once a month." The letter of Drisius to the Classis of Aug. 14, 1664, reads: "every two months" and refers to himself, only (Doc.

Col. Hist. 13: 391). The paragraph on p. 208 relating to the Waldenses includes this sentence: "From 1652 to about 1750, their chief settlement, so tradition avers, was at Stony Brook," which is unsupported by the known facts. The colony under Capt. Adriaen Post from 1650 to 1655 was not at Stony Brook but near the Watering Place (PROC. STATEN IS. ASSOC. 6: 30) and the names of the colonists are Dutch (Doc. Col. Hist. 13: 74-75) not Waldenses. The entire volume is interesting reading with many passages of brilliant composition, but so far as Staten Island is concerned does not disclose new facts.

C. W. L.

BOOKS IN THE RUNNING FORDS OF RICHMOND, by Selma Robinson, in New York Tribune Sunday May 6, 1923.

This is a newspaper article describing the automobile book wagon in which the St. George branch of the Public Library distributes books to the most remote parts of Staten Island. Four times a week Miss Anita M. Allen or her assistant sets forth with packages of books for subbranches and shelves filled with books from which individual patrons may make selection. The traveling book wagon is said to have originated in Hagerstown, Md., and appears to have become an established institution on Staten Island.

C. W. L.

Records of Meetings

CONDENSED REPORT OF INSTITUTE MEETINGS

Oct. 21, 1922.—Mr. William T. Davis presented a collection of the 99 species of Orthoptera known to inhabit Staten Island including the large introduced praying mantis, the katydids, crickets, and grasshoppers. The songs at night of many were imitated, and the discovery of *Neoconocephalus exilis canorus* by its different song was told.

Nov. 18, 1922.—Mr. Herbert K. Job exhibited four reels of motion pictures taken by himself, illustrating bird life on the coast of Maine, Magdalen Islands, and Gardiners Island, with appropriate comments.

Dec. 16, 1922.—Mr. Charles A. Philhower exhibited his collection in part of Indian relics and described the Lenni-Lenape tribe of the Algonkin nation which lived on Staten Island and the frequent visits of other tribes from New Jersey and New York State.

Jan. 20, 1923.—Mr. L. O. Armstrong spoke of the Lure of the North, illustrating with lantern slides and motion pictures British America from Quebec to the Mackenzie River.

Feb. 17, 1923.—Mr. Royden Woodward Vosburgh spoke on The Recollections of old Judge Mersereau, effectually disproving the tradition of a Dutch settlement on Staten Island as early as 1624.

March 17, 1923.—Miss Ida M. Mellen, secretary of the New York Aquarium, spoke of its management and exhibits with illustration by lantern slides and motion pictures.

April 21, 1923.—Mr. Victor Hugo Paltsits, chief of the American History Division, New York Public Library, delivered a learned address on the Dutch Period of New York history.

May 19, 1923.—Mr. Charles W. Leng spoke on Human Interest in Beetles with special reference to the benefits derived from and harm done by these insects.

Oct. 20, 1923.—Mr. Charles Gilbert Hine read the story of Jesse Bedell and the Haunted Swamp. Mr. William T. Davis read three contributions to the natural history of Staten Island, printed on pages 126-138. Dr. James P. Chapin spoke of his visit to Panama. Mr. George S. Humphrey spoke of the mountains of North Carolina. Mr. W. Lynn McCracken spoke of the work done by Mr. Davis in favor of natural park areas on Staten Island. Mrs. Edna E. Snow spoke of her experiences in keeping salamanders alive. Mr. Davis exhibited sticklebacks killed by creosoting the spring in which they lived as part of misdirected efforts to exterminate mosquitoes. He also described the spread of the chestnut blight.

Nov. 17, 1923.—Mr. W. L. Calver presented a collection of Revolutionary relics found at the site of the British fort at Richmond, and described the work done by the field committee of the New York Historical Society there and elsewhere.

Dec. 15, 1923.—Mr. Howard H. Cleaves exhibited about one hundred

views made from his own photographs of southwestern scenery, animals, and birds, using the title *Camera Shots from the Far Southwest*.

Jan. 19, 1924.—Mr. Charles A. Philhower exhibited Indian implements found by him in the region inhabited by the Lenni-Lenape and explained their use.

Feb. 16, 1924.—Mr. George P. Engelhardt, with copious illustrations, spoke on *Coral Reefs and Coral Islands in the Bahamas*. Mr. Davis spoke in reference to a lithograph representing *Quarantine about 1855* presented by Miss Agnes Ludlow.

March 15, 1924.—Dr. James P. Chapin spoke on *A Naturalist's Vacation in Panama* with many fine illustrations of its natural scenery and animal life.

April 19, 1924.—Mr. William Sloan, assisted by Mrs. Jessie Ewart Green, presented a lecture on *In Bonnie Scotland with Robert Burns*, in picture, song, and story before an audience that filled the auditorium.

May 17, 1924.—Mr. Royden Woodward Vosburgh spoke on *The Settlement of New Netherland 1624*, presenting the evidence on which the accuracy of this date is founded.

SPECIAL MEETINGS

Sep. 15, 1922.—Reception at Britton Cottage to Dr. and Mrs. N. L. Britton by Daughters of American Revolution, Mrs. Robert W. Gardner chairman for the occasion and Miss Laura B. Yetman in charge of arrangements, and the Staten Island Institute of Arts and Sciences represented by Mr. William T. Davis vice president. After a description of the cottage, its gift to the Institute by Doctor and Mrs. Britton, and furnishing by the D. A. R., an address on Valley Forge was delivered by Rev. W. Herbert Burt.

Feb. 24, 1923.—Illustrated lecture on *Physiotherapy* by Major C. M. Sampson, which dealt with the good results of thermal treatment in extreme cases of war-time injuries.

May 22, 1923.—Joint meeting at Britton Cottage of D. A. R. and the Institute for presentation of an American Flag. Addresses were made by Mrs. Flora A. Patterson, regent of the chapter, by the state regent, Mrs. Frances Tupper Nash, and by Hon. Howard R. Bayne, president of the Institute.

Nov. 19, 1923.—Joint meeting with the Staten Island Historical Society. Hon. and Rev. Dr. William Prall spoke on *The Reformation and Origin of the Church of the Huguenots*.

Dec. 3, 1923.—At a special meeting to which public officials and members of several civic associations were invited, Mr. Thomas Adams, general director of plans and surveys for the Sage Foundation, spoke on *City Planning As Applied to Staten Island*.

May 17, 1924.—Huguenot-Walloon Tercentenary Celebration. At 2:50

p. m. the ceremonies commenced with a historical pilgrimage in which about forty automobiles participated. Mr. R. W. Vosburgh was the marshal and under his skilful direction about twenty places were visited in three hours time. A short stop was made at the Perine House, where Mr. Wm. T. Davis, president of the Staten Island Historical Society, and Mr. Charles W. Leng, local historian, made brief addresses. Some of the cars stopped also at the Dutch Reformed Church in Port Richmond, where Rev. Dr. O. L. F. Mohn met the guests. At 5:30 p. m. a reception, under the charge of a committee of which Mrs. Marie Burt Tefft was chairman, was held and an address of welcome was made by Hon. Howard R. Bayne, president of the Institute. Short responses were made by several trustees, members, and guests. Among the guests were Rev. John Baer Stoudt director and Miss Antonia H. Froendt secretary of The Huguenot-Walloon New Netherland Commission, Rt. Rev. James H. Darlington Bishop of Harrisburg, Chaplain Georges Lauga representing the churches of France, Rev. Leonard Hagois, representing the churches of Belgium, Mr. and Mrs. Victor Hugo Paltsits of the New York Public Library, Mr. and Mrs. Alexander J. Wall of the New York Historical Society, Rev. and Mrs. J. Howard Brinckerhoff, Rev. and Mrs. Oscar Fitzland Moore, Mrs. William Prall, Rev. Mebane Ramsey, Dr. N. L. Britton, Miss H. L. Britton, Mrs. N. D. Chapman, the Misses Laura and Grace Yetman, Mrs. C. M. Steinrock, Mrs. D. D. Feldman, Mrs. T. Livingstone Kennedy, Mrs. L. A. Camacho, Mrs. F. A. Patterson, Mr. and Mrs. Robert W. Gardner, Mrs. H. C. Bugbird, Hon. Mark W. Allen, Mr. Geo. L. Egbert, Mr. Anton L. Schwab, Mrs. J. B. H. Greaves, Miss A. M. Allen, and Mr. Cornelius G. Kolff. The last named, secretary of the Staten Island Historical Society, procured many automobiles beside his own and provided maps, on which the route was indicated by Dr. A. W. Callisen. Mr. W. A. Voorhees of the Richmond County Branch, Holland Society, also assisted in procuring cars. Messrs. John W. Morris, F. H. Hummel, Morris Gerst, William and Pieter C. Vosburgh, and Carol Stryker aided the marshal. It is to be regretted that a complete list of automobiles can not be given nor a complete list of those who assisted in various ways. Mr. P. L. Sperr added to the pleasure of the guests by his photographs of the old houses visited. The Daughters of the American Revolution also cooperated.

May 18, 1924.—The Tercentenary Celebration was continued by dedication of a memorial church at Huguenot Park. As a part of the ceremonies Hon. and Rev. Dr. William Prall delivered an address on Pierre Billiou (p. 108).

MEETINGS OF SECTIONS

SECTION OF HISTORICAL RESEARCH

George W. Tuttle chairman, S. McKee Smith recorder.

Meetings have been held jointly with Staten Island Historical Society

on Jan. 22, 1923, at which Mr. Charles W. Leng presented a paper on Ecclesiastical History of Staten Island in the Seventeenth Century (this issue, p. 113); on May 19, 1923, at which papers were presented by Mr. Tuttle on A Seventeenth Century Map of Staten Island (p. 91), Mr. Royden W. Vosburgh on the Settlement of New Netherland 1624, and by Mr. Leng on Pierre Billiou; also on March 10, 1924, at which Mr. Leng presented a History of the Old Church of St. Andrew. The rector, vestry, and part of the congregation of the church attended the last named meeting.

Members of this section, viz.: Mr. R. W. Vosburgh, Mr. E. C. Delavan, Jr., Mr. Wm. T. Davis, and Mr. C. W. Leng, have copied a large number of epitaphs, which with the records of several churches have been typewritten and bound by Mr. Vosburgh. Eight volumes have been completed and with the help of Mr. Pieter C. Vosburgh indexed on cards. The churches and cemeteries thus far covered are:

Asbury Methodist Episcopal Church at New Springville, Bethel Methodist Episcopal Church at Tottenville, Woodrow Methodist Episcopal Church at Woodrow, Reformed Dutch Church at Port Richmond, Reformed Protestant Dutch Church at Tompkinsville, Reformed Protestant Dutch Church at Richmond, Reformed Protestant Dutch Church at Huguenot, St. Luke's Protestant Episcopal Church at Rossville (including gravestone inscriptions in Rossville), St. Paul's Protestant Episcopal Church at Tompkinsville, St. Andrew's Protestant Episcopal Church at Richmond, Gravestone Inscriptions from Sylvan Grove, Merrill, and Hillside Cemeteries in former town of Northfield and The Church of the Ascension, Staten Island and Fountain Cemeteries in former town of Castleton.

These eight volumes are embellished with a large number of photographs, made by Mr. Davis, and the dates cited for incorporations, deeds, etc., are verified by searches made by Mr. Delavan.

SECTION OF NATURAL SCIENCE

Charles W. Leng chairman, Edward J. Burns recorder.

The annual meetings have been held in conjunction with meetings of the Nature Club, with which the section is to some extent merged. Messrs. Leng and Davis, members of this section, have published List of the Coleoptera of Staten Island, being part 1 of this volume, issued Feb. 27, 1924.

SECTION OF COMMUNITY THEATER

Osborn Marcus Curtis chairman, Mrs. Alexander R. Smith recorder.

This section was organized Feb. 17, 1924. It held an open meeting in the Museum on Feb. 25, at which a dramatic film, *Toilers of the Soil*, was presented.

SECTION OF MUSIC

William Schild acting president, Peter A. Garzetta secretary-treasurer.

This organization, also known as the Lyric Orchestra, became a section of the Institute May 20, 1922, by all the members of the Orchestra becoming members of the Institute and thereafter forming its section of music. Rehearsals have been held on Friday evenings, one of which on May 9, 1924, was made public. Concerts have been given in the Curtis Lyceum as follows: April 7, 1922, Leon E. Verry, director; Nov. 19, 1922, Leon E. Verry, director; April 6, 1923, Leon E. Verry, director; dance music directed by Ed. Stanley; Feb. 15, 1924, Carmine L. Amorosi, director; dance music directed by Ed. Stanley. The chairman of the Entertainment Committee for each concert has been Mr. Anton W. Hoffmeyer. The officers of the Orchestra have been, beside the above named: Max Thaten, sponsor; Henry G. Flamm, president; Geo. P. Eckhardt, Wm. Schild, Ed. Stanley, Walter Stanley, vice presidents; Herman Danischewski, secretary-treasurer.

The Orchestra has been heard in addition to its stated concerts at several other events in the museum and elsewhere.

SECTION OF LITERATURE

The organization of this section was approved by the Board of Trustees on April 5, 1924, on application by Terijon Weitling, Caroline D. Weitling, Cornelius G. Kolff, A. W. Callisen, Howard R. Bayne, Mr. and Mrs. Lester L. Callan. A meeting was held on May 11 at the home of Doctor Callisen.

SECTION OF ART

No meetings have been held but the members of the section have supported the Art Loan Committee, whose report is given below.

COMMITTEES

WOMEN'S AUXILIARY

Mrs. James R. Walsh chairman.

Oct. 25, 1922.—Mr. Andrew B. Humphrey, of the Sulgrave Institute, and Mr. William T. Davis were the speakers. A gavel made from Sulgrave Oak and Christopher House Elm was presented. Mrs. William G. Willcox spoke on Safety First.

Nov. 29, 1922.—Mrs. Ruth Crosby Noble spoke on Museum Work for Children.

Dec. 1922.—A card party was given at the residence of Mrs. Walsh, managed by Mrs. H. Everett Meets, for the benefit of the lantern slide fund.

Jan. 31, 1923.—Miss Edith R. Abbot, of the Metropolitan Museum of Art, spoke on French Art and the Barbizon Period.

Feb. 28, 1923.—Mr. Charles W. Leng spoke on George Washington.

March 28, 1923.—A surprise luncheon, managed by Mrs. A. W. Hoffmeyer, was served for the benefit of lantern slide fund.

April 25, 1923.—Mr. Flavel Shurtleff, of the Sage Foundation, spoke on City Planning.

May 1923.—Election of officers.

Oct. 31, 1923.—Mr. Charles W. Leng spoke on Insect Friends and Foes.

Nov. 28, 1923.—Mrs. Edwin Markham spoke on Early American Poets.

Dec. 11, 1923.—A card party was given, managed by Mrs. E. H. Meets.

Jan. 30, 1924.—Mrs. Elise P. Carey, of the Metropolitan Museum of Art, spoke on Egyptian Art.

Feb. 27, 1924.—Mr. W. L. Calver, of the New York Historical Society, spoke on Revolutionary Camp Sites.

March 26, 1924.—There was a box luncheon managed by Mrs. H. B. Nichols.

April 30, 1924.—Election of officers.

May 28, 1924.—Mrs. James R. Walsh reported her attendance at the annual meeting of the American Association of Museums held in Washington, D. C.

Refreshments have been served by a committee of which Mrs. A. A. Rottmann was chairman.

ART LOAN COMMITTEE

Mrs. Robert W. Gardner chairman.

The following exhibitions have been given: Sep. 30, 1922.—Flower paintings and designs, by Mr. J. F. Schaetzel.

Oct. 10, 1922.—Paintings by Mr. Jan Van Empel.

April 10, 1923.—Paintings and Sculptures by members of National Association of Women Painters and Sculptors, Miss Harriet Lord assisting.

Summer 1923.—Weekly classes for children in flower painting and clay modeling.

April 7, 1924.—Architectural Designs, by Staten Island Association of Architects, Mr. James Whitford chairman.

April 10, 1924.—Silver Candlesticks, loaned by the Gorham Company, through Mrs. John Prest of the Women's Auxiliary.

May 8, 1924.—Paintings owned by Staten Islanders.

HOSPITALITY COMMITTEES

Mrs. Charles A. Ingalls chairman of the Institute committee, Mrs. A. A. Rottmann chairman of the Women's Auxiliary committee. These committees, which have been a feature of the organization for many years, have continued to serve light refreshments at the meetings, thus promot-

ing social intercourse. Those who have assisted are Mesdames Barnaby, Batz, Beaumont, Carwell, Craig, Donelly, Franklin, Gravel, Hoffmeyer, Ingalls, Kraft, Leng, Meets, Mills, Nichols, Ochensfeld, Roberts, Rottmann, Snow, Stott, Todd, Van Wormer, Ware, Wedemeyer, Witte.

AFFILIATED SOCIETIES

STATEN ISLAND BIRD CLUB

William T. Davis president, Charles W. Leng secretary-treasurer, Carol Stryker field secretary.

In addition to monthly bird club walks, devoted to the study of birds etc. in the field, the club has held the following meetings: May 12, 1923, at the Bird Club Cabin in the woods. Mr. Herbert F. Stone was appointed chairman of committee to build fieldstone fireplace in the cabin. Mr. Davis was appointed to prepare a resolution favoring natural areas in parks. Oct. 27, 1923, at the residence of Mrs. L. A. Dreyfus. Mr. Davis announced the printing and circulation of a plea for natural areas and the receipt of many commendations, one even from New Zealand. May 22, 1924, in the Public Museum. Tenth annual meeting, 324 members enrolled. Mr. Davis exhibited by lantern slides, photographs of bird club walks, bird club cabin, and scenes nearby. Mr. Stryker exhibited Indian method of making fire by rubbing sticks. Messrs. Davis, Stryker, Sperr, Chapin, Decker, and others condemned the Crow Shooting Contest. Mr. Cleaves exhibited by lantern slides, original photographs of wild life in many parts of the United States.

The lectures on Nov. 18, 1922, by Herbert K. Job, and on Dec. 15, 1923, by Howard H. Cleaves, were provided by the Bird Club.

THE HORTICULTURAL SOCIETY OF STATEN ISLAND

Fred S. Heal president, Karl Nesslinger secretary-treasurer 1922-3, Leonal W. Hoffmeyer 1923-4. Organized Jan. 26, 1921, with Chas. P. Benedict as its first president, this society has held the following meetings and flower shows during the past two years: May 10, 1922, illustrated lecture on Rock Gardens, by Mr. Montague Free of Brooklyn Botanic Garden. June 10 and 11, 1922, rose show, under management of Mr. John Rader. June 14, 1922, illustrated lecture on Hardy Garden Plants, by Mr. Kenneth Boynton of New York Botanical Garden. Aug. 19 and 20, 1922, gladiolus show, under management of Mr. J. Mortimer Vanderbilt. Sep. 13, 1922, business meeting. Sep. 30 to Oct. 1, 1922, dahlia show, under management of Mr. Frank L. Doty. Nov. 8, 1922, business meeting. Nov. 11-13, 1922, chrysanthemum show, under management of Mr. John Rader. Jan. 10, 1923, illustrated lecture on Soil, by Miss Ellen Eddy Shaw of the Brooklyn Botanic Garden. March 14, 1923, business meeting. April 11, 1923, business meeting. May 9, 1923, illustrated lecture

on Roses, by Mr. Kenneth Boynton. June 9-11, 1923, rose show, under management of Mrs. A. A. Rottmann. Aug. 11-13, 1923, gladiolus show, under management of Mr. J. Mortimer Vanderbilt. Sep. 12, 1923, business meeting. Sep. 29 to Oct. 1, 1923, dahlia show, under management of Mr. Frank L. Doty. Nov. 3, 5, 1923, chrysanthemum show, under management of Mr. John Rader. Nov. 14, 1923, business meeting. Dec. 12, 1923, business meeting. March 9, 1924, board meeting. March 12, 1924, business meeting.

As a result of these meetings prizes for the best single dahlia flower and for the best collection were offered by Mr. R. D. H. Vroom and Mr. Sheldon J. Pardee.

April 9, 1924, illustrated lecture on Trees, Shrubs and Fruit in Suburban Gardens, by Mr. Henry Hicks, of Westbury, L. I. May 14, 1924, illustrated lecture on Spring Flowering Bulbs, by Mr. Kenneth Boynton.

NATURE CLUB

Miss Miriam A. Campbell president, Edward J. Burns secretary. Monthly meetings have been held, developing a large number of natural history notes, which are reviewed in this issue, p. 139.

Annual Reports

(Abridged)

REPORT OF THE BOARD OF TRUSTEES

May 19, 1923.—There have been 308 functions of various kinds with an attendance of about 2000 per month. The number of gifts and accessions have been 1283. The permanent collections have been improved in all departments and especially by additions to lantern slide collection, by Mr. Burns' group illustrating Billop House Conference and by Mr. Davis' gift of a complete collection of Staten Island Orthoptera. In fine arts three exhibitions were given; in history our ecclesiastical records were preserved; in natural science the operations resulted in the publication of many pages in our PROCEEDINGS.

May 17, 1924.—There have been about 360 functions with a total attendance of 28303. The number of gifts and accessions have been 2465. The permanent collections have been improved, especially in birds by a gift from Edward Avis. In the department of art new sections of Community Theater and of Literature have been formed; in history the records of ten churches have been typewritten by Mr. R. W. Vosburgh with photographic illustration by Mr. Wm. T. Davis; in natural science a List of the Coleoptera of Staten Island by C. W. Leng and Wm. T. Davis has been published. The increasing public interest in the Institute is shown by the membership, 424, the largest recorded, and by the bequest from the late William G. Willcox, to be received in October.

REPORTS OF THE TREASURER

MAY 19, 1923

INCOME

Balance last report.....	\$ 454.26	
Receipts	1,963.11	
		<u>\$2,417.37</u>

OUTLAY

Paid for printing &c.....	\$1,190.72	
Paid on account of notes.....	300.00	1,490.72
		<u></u>
Balance		\$ 926.65
John J. Crooke Fund.....	2,000.00	
D. M. Van Name Fund.....	100.00	
Permanent Fund	2,000.00	4,100.00
		<u></u>
Total assets.....		<u>\$5,026.65</u>

Liabilities \$1,200.

MAY 17, 1924

INCOME

Balance last report.....	\$ 926.65	
Receipts	2,551.61	
		<u>\$3,478.26</u>

OUTLAY

Paid for printing &c.....	\$1,736.86	
Paid on account of notes.....	1,200.00	2,936.86
		<u></u>
Balance		\$ 541.40
John J. Crooke Fund.....	2,000.00	
D. M. Van Name Fund.....	100.00	
Permanent Fund.....	2,000.00	4,100.00
		<u></u>
Total assets.....		<u>\$4,641.40</u>

Liabilities \$400.

LIST OF DONORS MAY 20, 1922 TO MAY 23, 1924

Ahrens, H. A.	Druliner, Mrs. H. P.
American Museum Nat. Hist.	Eardeley, J.
Anderson, Capt. Wm. A.	Eberman, Charles
Avis, Edward	Egbert, Rae
Bardwell, Mrs. D. L.	Erie Public Museum
Bayne, Hon. Howard R.	Finnegan, Cornelius
Baumont, Arthur	Fleming, W. J.
Beil, Carlton	Flosky, Edward
Bellmeier, Fred	Frye, Alethea
Bequaert, Dr. Joseph	Gabbett, Cecil
Beyer, Gustav	Gerst, Manny
Biesc, Edward	Gorham Company
Brick, Samuel R.	Greaves, R. H.
Brinckerhoff, Rev. J. Howard	Green, Mrs. W. H.
Britton, Dr. N. L.	Hall, Edw. Hagaman
Brooks, Bertha G.	Hanks, Miss Annie D.
Burger, Charles	Harned, Daniel de V.
Burns, Edward J.	Harned, R. W.
Calver, W. L.	Heal, Fred S.
Carney, Dr. Sidney H., Jr.	Heineman, Mrs. E.
Carney, Miss Hortense A.	Hicks, Charles A.
Cattermole, Mrs. Henry M.	Hillyer, J. Blake
Chamberlin, Willard J.	Hine, Chas. Gilbert
Chambers, Mrs. Geo. P.	Hirst, Mrs. Claude Raguet
Clark, Appleton L.	Hoffmeyer, Anton W.
Clark, Mrs. A. L.	Hoffmeyer, Mrs. A. W.
Clark, Edwin P.	Hollick, Dr. Arthur
Clark, Thomas F.	Hunt, Pearson
Cleaves, Howard H.	Ingalls, Mrs. C. A.
Clute, D.	International Nickel Co.
Conway, Miss Mary M.	Jacot, Miss Mary
Crimoli, Philip	Janin, Franklin
Crooke, John J., Fund	Johnson, G. L.
Dailey, Rev. W. P. N.	Johnson, W. E.
Davis, William T.	Jones, Ralph
Delavan, Edward C., Jr.	Joseph, Rev. Oscar L.
Delavan, Miss M. B.	Kingsley M. E. Church
Dixon, Oswald	Kopf, C. M.
Doty, Frank L.	Kraft, Mrs. Ethel L.
Douglas, Mrs. Richard	Lake, Miss Eliza
Downey, William H.	Leng, C. W.
Dreyfus, Mrs. L. A.	Liebeck, Charles
Dronne, Emile	Loeffler, A.

- Lucas, Dr. F. A.
Lynch, Hon. John A.
Lyon, Mr. & Mrs. L. G.
Lyonnais, Leon Bossue dit
Manee, Mrs. Wilber N.
Markham, Mrs. Edwin
Mase, Miss Caroline
Mayer, Mrs. Walter S.
McCrae, Miss M.
McSorley, Mrs. Camille L.
Meyerowich, I.
Michell, Arthur A.
Mills, Mr. & Mrs. T. W.
Mitchill, Wm. H.
Moore, Mrs. O. F.
Murdock, Miss Marie
Needham, Dr. J. G.
Nesslinger, K.
N. Y. Historical Soc.
N. Y. State Dep. Agric.
N. Y. State Dep. Health
N. Y. Zoological Park
Nichol, Harold
Nichols, Horatio B.
Nichols, Percival K.
Nickolls, Dr.
Parker, Edward F.
Parmele, Mr. & Mrs. Chas. Roome
Parmele, Mrs. H. G. W.
Patterson, Mrs. F. A.
Pero, Walter
Philhower, Chas. W.
Pollard, Agnes L.
Pollard, Charles Louis
Rader, John
Rader, Peter
Riordan, Hon. D. J.
Schott, F. M.
Schramme, C. J.
Shoemaker, Ernest
Simonson, Mrs. Lewis
Smith, S. McKee
Snow, Mrs. Edna E.
Snyder, Mrs. Gertrude
Sperr, Percy L.
Sprague, U. G.
Stemmler, F. W. A.
Stillwell, Dr. John E.
Stone, M. E.
Stott, Mrs. E. A.
Sullivan, Dr. James
Takamizawa, Capt. M.
Tefft, Mrs. C. E.
Tietker, Arthur
Tompkins, The Misses
Torrey, Raymond H.
Tower, Dr. R. W.
Townsend, Mrs. F. C.
Trench, Katharine
Tribus, L. L.
Tucker, Harry F.
Tuttle, George W.
Uslan, Nathan
Valentine, Kenneth
Van Horn, R. C.
Van Laer, Arnold J. F.
Van Name, Annie E.
Van Name Fund
Van Pernis, Petronella J.
Van Vleck, Mrs.
Vosburgh, R. W.
Walser, F. T.
Walsh, Mrs. James R.
Weatherdon, Mrs. F. J. E.
Wenzel, H. W.
Wertheim, Miss Bertha
White, John P.
Whitman, F. S.
Whitmore, Miss Edith
Widdecombe, A. B.
Willcox, Mrs. W. G.
Women's Auxiliary
Woodruff, Lewis B.
Woods, Ella F.
Worthley, H. H.
Yetman, Miss Laura B.
Zeltner, Ernest T.

List of Members

MAY 24, 1924

PATRONS

Benedict, Charles P.	Havemeyer, Frederick C.
Britton, Dr. N. L.	Hollick, Dr. Arthur
Britton, Mrs. E. G.	MacDonald, D. Wallace
Chapin, Dr. James P.	Mitchill, William H.
Davis, William T.	Pollard, Charles L.
Dow, Robert P.	Skinner, Alanson B.

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